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ORIGINAL ARTICLES.

DIETETICS IN GASTRIC DISEASES.

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THE means employed to combat diseases of the gastric apparatus may be summarized under three headings, dietetic, mechanic, and medicinal. Of these the dietetic are of primary importance. Nearly all pathologic states of the stomach imply a disturbance in either its motor, resorptive, or secretory function, or a combination of these. In the first and second it is usually in the direction of retardation; in the third we find diminished and heightened activity of the glandular apparatus of the stomach to be of equal frequency of occurrence. All abnormalities in the chemification of the food can be traced to either one of the preceding factors or a combination of them.

Wherever there is an inhibition of the motor power of the stomach, whether due to mere functional adynamia, as in atony, or to structural changes, as in dilatation or carcinoma ventriculi, the same principles of alimentation obtain, modified, of course, by the various chemic conditions present, as well as certain etiologic considerations. In this condition a restriction of the quantity of liquids and adherence to a solid diet mainly are indicated. Liquids in any considerable quantity further the relaxation of the stomach: 1. By their dead weight alone. 2. They do not furnish anything tangible on which the walls of the stomach can contract, as in the case of solids. 3. By their very fluidity they fail to make that impact upon the nerve-filaments of the mucous membrane which is so necessary for the production of peristalsis.

It is especially in dilatation, in which the resorptive function of the stomach suffers such marked impairment, that a strict adherence to the preceding principle becomes imperative. As corollaries of this principle must be added the consistence and preparation of the food, which must be such as not to be incompatible with tolerably easy digestion. As retardation in the motor function of the stomach is usually associated with alterations in the gastric secretion, the selection of a suitable regimen in any given case will have to be modified to meet the chemic conditions.

As a rule, whenever there is an appreciable re-

tardation of the peristaltic function of the stomach we shall find also a concomitant diminution in the production of both free and combined hydrochloric acid. There is, however, one marked exception to this rule, namely, dilatation either idiopathic or due to stenosis of nonmalignant origin, as, for instance, in constricting cicatrices of healed ulcers. In these cases we will generally find a marked increase in the production of the normal acid elements of the gastric juice. In several cases of benign dilatation that have come under my observation, I found a percentage of 120 with $\frac{1}{10}$ normal alkaline solution, or somewhat more than twice as much as usually obtains in normal gastric secretion.

Again, we may have very marked hypersecretion in gastric disturbance of nervous origin, when there is present very little or no retardation of the motor function.

As the motor and resorptive phenomena of gastric digestion furnish us with the first principle laid down, which, for convenience' sake, may be called the physical principle of dietetics, in the same way the chemic phenomena of digestion furnish us with a second fundamental principle in dietetics, which may be called the chemic principle. This second principle may be roughly stated as follows: The administration of the albuminous, starchy, and saccharine articles of diet is to be regulated by the quantity of hydrochloric acid and ferments which the examination of the gastric contents reveals.

In the application of these two fundamental principles of dietetics, let us first consider those conditions characterized by a diminution in the production of hydrochloric acid and ferments and retardation of the motor function. To this group belong acute gastritis (frequently), chronic gastritis, certain forms of nervous dyspepsia, carcinoma ventriculi, and atony.

By selecting one of these conditions as a type for all, we may construct a paradigm of treatment which, with some slight inflections to meet certain conditions obtaining in each, we can apply with tolerable accuracy to all. Of the whole group, chronic gastritis offers by far the largest field for instruction in respect to dietetics.

The dietetics of chronic gastritis.—Whenever there is manifested a disposition to repeated attacks of acute gastritis, the condition known as chronic gastritis ultimately sets in. As chronic gastritis is associated with a progressive change in the interstitial elements

of the stomach and a diminution in the acid and peptonizing elements of the gastric juice, which progress *pari passu* with the interstitial changes, our dietetics should conform to the degree of chronicity attained by the disease.

In the very first onset of chronic gastritis, when the disturbances in the functions of the stomach are slight, any considerable departure from the normal rule of diet is unnecessary. When, however, flatulence, eructations, a sense of weight and pressure, diminution of appetite, a disinclination for meat and other albuminous articles of diet denote a lessened activity in the secretory and motor functions of the stomach, the moment has supervened when it becomes necessary to contract the promiscuity of the ordinary bill of fare into narrower limits. The symptoms, both subjective and objective, and especially the examination of the gastric contents, must guide us in our choice of a suitable regimen.

When there is any appreciable diminution in the quantity of free and combined hydrochloric acid, together with diminished activity of the rennet-principle, as evinced in the slower and inefficient coagulation of milk to which a few drops of the gastric juice have been added, the careful selection and preparation of the albuminous articles of food are indicated.

In testing for rennet, we best proceed by adding a few drops of the filtered gastric contents to about 5 c.cm. of milk and setting aside the same in a thermostat at a temperature of about 100° F. If rennet be present, the characteristic coagulation will supervene in ten or fifteen minutes.

In the choice of animal food it is best to avoid those tough and fibrous varieties of beef that require a longer period for their disintegration. For this reason also "smoked" articles of food should be eschewed. Our choice should be restricted to calves' brains, sweetbread, the more tender parts of the beef, boiled ham, boiled tongue, hare, chicken, fish, and oysters, as requiring less time for their digestion. Eggs in any form are also suitable.

The preparation of the food is a nice point in dietetics. As a rule, boiled, baked, and stewed meats require less time for their digestion than when fried. As to the hydrocarbons (vegetables and farinaceous articles of food), those containing the least proportion of cellulose, and consequently leaving little or no residuum after digestion, are to be preferred. Potatoes, cauliflower, peas, turnips, wheat-bread, rice, and spinach should receive preference. Cabbage and celery should be eschewed; likewise raw fruits, apples, pears, etc.

In the advanced stages of chronic gastritis, when there is marked change in the interstitial elements of the stomach, causing a partial obliteration of the glandular elements, with a concomitant diminution in the production of hydrochloric acid and fer-

ments, the most careful preparation of the food is imperative. In this stage the inclination of the patient will lean toward the farinaceous articles of food. Vegetables, such as potatoes, carrots, spinach, etc., should be eaten in the form of *purée*.

As in this stage the stomach responds but feebly in the digestion of animal food, the most careful selection and preparation in this respect are indicated. Beef especially, if partaken of, should be chopped or hashed.

Patients with chronic gastritis manifest a desire for hot and piquant condiments, such as pepper, mustard, pickles, etc. As these articles only serve to irritate the mucous membrane, but no more than a very moderate indulgence in them is permissible. On the other hand, a liberal quantity of salt is indicated, as it furnishes the material out of which the gastric juice is elaborated, and thus contributes to the formation of hydrochloric acid, of which there is such a lack in chronic gastritis.

In order to guard against the possible denutrition that may occur, owing to the marked disinclination of the patient for albuminous articles of diet, we would do well to include in our regimen such vegetables as peas, beans, and lentils, which contain a large percentage of leguminose (vegetable albumin).¹

This scheme of diet for chronic gastritis will amply satisfy all the demands to be filled in cases of atony. As in atony there is very little curtailment in the production of the gastric juice, we may abate somewhat the severe restrictions which in advanced stages of chronic gastritis we place upon the albuminous elements of diet.

In cases of acute gastritis the let-alone principle is the best; a two or three days' rest for the overtaxed organ is all that is required to meet the conditions.

A word may be said here respecting the inhibition of the gastric functions of nervous origin. As a rule, any attempt on the part of the physician to erase the discomforts of the patient suffering from nervous dyspepsia, by the regulation of the diet, will prove unavailing. It is surprising in these cases how the heaviest articles of diet are borne without the slightest discomfort, when the lighter articles of food, even milk, will be intolerable. The best rule of dietetics to be followed in these cases is to submit to the idiosyncrasies and inclinations of the patient.

It remains for us to consider in how far we can utilize the scheme of diet laid down for chronic gastritis in cases of carcinoma ventriculi.

¹ "That legumin constitutes not only a nutritious article of diet, but also suffices for all the demands of nutrition as respects the nitrogenous metamorphosis, is evinced by the experiments of Rubner on an adult in whom, by the administration of 500 grams of peas, all the demands necessary to preserve the equilibrium of the nitrogenous metamorphosis in the body were satisfied." Quoted from Munk, Uffelmann, Ernährung.

So long as the glandular apparatus exhibits a tolerably fair activity and the motor insufficiency is not so marked, we may with advantage employ a diet such as is indicated in advanced states of chronic gastritis. Milk, containing, as it does, a considerable percentage of albumin in a digestible form, will aid much to support the nutrition of the patient.

As the diminution in the production of hydrochloric acid progresses, the farinaceous articles of food will be found to agree best with the patient. As the early supervention of motor insufficiency is one of the characteristic features of carcinoma, the most scrupulous care in the preparation of the food is necessary. Alcohol in the form of cognac or port-wine is of service in supporting the nutrition of the patient. Fat, in the form of good butter, is not contraindicated. Cacao and chocolate because of their high nutritive value do good service.

When the ferments show a very slight or negative reaction we may render the food somewhat more digestible by the process of peptonization. Peptonized milk and gruel may in this way be administered to advantage.

With the Germans the preparations known as "Leguminosen" are held in high repute on account of their large nutritive value. I have myself, in my clinical experience abroad, seen very good results from the use of these preparations in diseases of the alimentary canal attended with impairment of nutrition.

When the motor power of the stomach exhibits a marked degree of impairment, the nutritive demands of the body must be satisfied by rectal alimentation. As the prognosis in carcinoma ventriculi leads to but one inevitable result, all that can be accomplished by alimentation is to support the nutrition, and in this way postpone the final catastrophe.

821 WYLLIE AVENUE.

PHIMOSIS IN CHILDREN.

BY WILLIAM MARTIN, M.D.,
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THE only apology I shall offer for bringing this subject before the profession is that its frequency as a factor in children's diseases warrants it. Although no doubt thoroughly understood from all its various standpoints, I feel justified in emphasizing the necessity of more care in examination of children, when such conditions are the possible cause of many of the reflex symptoms from which these children suffer, and which seem so difficult for us to locate when called upon to prescribe.

Phimosis is looked upon as a natural condition in children, and to a certain extent it is so; but in the average practice there are, no doubt, many such ap-

parently normal conditions that act as the sole cause of ills that are difficult to trace. It is generally said that if the glans can be partially uncovered during early infancy, the normal condition is assured later. In many cases this may be true. The time for operation is said to be when the preputial meatus is barely sufficiently large for purposes of urination; yet even in this condition it is not infrequently left to nature to perform what the knife should do, and I do not hesitate to say that many physicians do not think to examine for phimosis in infants, and only operate when compelled to do so by urgent symptoms or by the persuasions of the parents. That this is not the general practice of the profession, I feel assured; yet, to my knowledge, it is true with some. When we find the still more aggravated condition of "ballooning," or when the prepuce is practically a sac allowing only a dribbling of urine, operation is imperative. The intensity of symptoms depends upon the amount of phimosis. These may be divided into direct and reflex. The former are due to the local irritation, and are purely those confined to the part; the latter, or reflex, may be said to be almost innumerable and not confined to any particular part of the organism. Of the direct symptoms, the most important are those of an inflammatory nature, which in time may develop into a suppurative form. Accompanying this inflammation, and often the result of it, we have adhesions and vegetations. Of these two, the adhesions are the more constant features and on which the reflex symptoms depend to a great extent.

The more common reflex disturbances are those of the digestive apparatus. We have all the features of indigestion, both of the stomach and intestine, aggravated and rebellious to treatment when the true cause is not determined. Irritability is another feature, accompanied by sleeplessness. Sedatives and hypnotics seem to have no permanent effect, and are almost useless. The effect of urination is sometimes startling to the mother, and the crying and discomfort are so pronounced that it directs the attention to the real cause when otherwise not known. The more aggravated the phimosis, the more decided are the reflex disturbances. Convulsions, while not so common, are frequently the result of this condition. These, if not serious, are at least alarming. Dr. Sayre, of New York, published some time ago several cases of relaxation of the muscles of the back with curvature of the spine in children, caused by phimosis with adhesions, the local irritation being so great as to keep the child in a condition of almost constant priapism.

Some physicians have claimed that a condition similar to Pott's disease has been the result of these adhesions and has been mistaken for it, and which

has been cured by operation for this preputial condition.

Prolapsus ani frequently accompanies phimosis in children when there is preputial inflammation. Symptoms simulating stone in the bladder have been traced to this condition. I feel confident that phimosis will aggravate the symptoms of any coexisting disease and be responsible for slow recovery in many cases. Without considering other possible reflex symptoms, I feel sure that those already enumerated will be sufficient to attract attention to the real necessity of examining each male child for this condition.

Passing from symptoms, the one evil most frequently the result of phimosis in its less decided type is masturbation, often the result of the local irritation in the small child, which he seeks to relieve by manipulation of the parts.

The statement that most cases will in time correct themselves is not altogether true, if by this the power of total retraction of the foreskin is meant; for if it were true, why would there be so many adults, with various venereal diseases, that come to the average physician's office who cannot retract the foreskin to any great extent? What does this condition mean when treatment is taken into consideration? I do not doubt that many will agree when I say that they have felt that had the family-physician done his duty to this man when a child, that he now would not be the disagreeable and difficult case to manage that he is. The proper treatment for a positive cure means the long-neglected operation in addition to the treatment for venereal disease.

Take another set of cases—those who consult the physician for real or fancied symptoms the result of masturbation. It is my experience that few, if any, can uncover the glans. There is nearly always local irritation, and often inflammation later as a result. Here, again, the early operation would have saved all this, and must be done now in order to cure. The sooner we come to pretty general circumcision, the better, physically and morally, will it be for coming adults.

As the operation is not an uncommon or difficult one, it is not necessary to enter into details. I wish to place myself on record as against the operation of simply slitting the prepuce in infants. This is of no practical value for permanent results. It will often suffice in adults, but in children, after union of the several parts, the condition is not much improved, and certainly the redundant prepuce is still there.

I will cite one case that I feel is quite typical of those of a more decided character:

The child was about two years of age, and the mother brought him to be treated for convulsions. These had become more frequent and of a more

severe type a few weeks preceding this time, happening as often as every day or so. The physician in attendance had done everything in his power to remove this condition, but in vain, sedatives and every remedy tried only having temporary effect. The condition of phimosis could not have been suspected, as the mother had no suspicion of trouble there. The child was anemic, had lost in flesh, had no appetite, seemed very irritable, and was sleepless. The mother seemed to feel that the child was not destined to improve, and was willing to have anything done to benefit him. Hearing the history made me suspicious of the real cause, and an examination quickly confirmed my opinion. The prepuce was elongated and inflamed, and exuded a purulent discharge which was typical. Of course the parts were very sensitive, and the child objected with energy to any manipulation. Operation was suggested and acted upon immediately, after which, under proper care, the inflammation subsided and improvement began. The child entered upon a new state of being, as it were, losing all the old symptoms, and gaining in every way.

This case is not an unusual one, although many are of a less severe type. I feel sure, however, that they occur sufficiently often to warrant the one thing I plead for—careful examination of every male infant, and when necessary the proper remedy for each case of phimosis.

431 RADCLIFFE STREET.

CREOSOTE CARBONATE IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

BY WILLIAM H. DUKEMAN, M.D.,
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In recommending any remedial agent in the treatment of tuberculosis of the lungs nowadays, one must do so with great reserve, and he should be fortified with such facts as will bear out his assertions. So many medicines have been recommended of late for this disease that even the nonskeptical are becoming shy, and are again falling back on the old empiric treatment. One by one each new remedy has fallen by the wayside for other newer ones to be tried that have come into the market. Of the latter creosote carbonate takes its place at the head of the list, and from reports so far I think we are justified in giving it a prominent place in the treatment of the disease. In many cases, however, the physician, the pharmacist, or the patient is more to blame that a remedy fails rather than that the remedy itself is of no value. First, we must have a pure drug, then a system in its administration, and finally a dutiful patient to carry out in detail, systematically and thoroughly, everything advised. Without these precautions well followed up, no one should expect to be able to combat so destructive a disease.

In creosote carbonate the manufacturing pharmacist has succeeded in giving us a preparation of

creosote that is nonpoisonous and nonirritant, and capable of being given in doses sufficiently large to produce a general systemic effect without any evil drawbacks. Creosote carbonate contains 92 per cent. of the purest beechwood-creosote chemically combined with 8 per cent. of carbon dioxide. The preparation is a limpid, oily-looking solution, and remains in perfect solution for some time. As age or conditions of weather grow on it, it partially separates, forming a thickened, cloudy mixture, which, however, is readily overcome by placing the bottle in a water-bath, keeping the water boiling until the temperature of the creosote carbonate reaches 210° F., which will sometimes take from twenty to thirty minutes or longer, when it will again resume its perfect normal solution, and remain so for a long time.

The remedy is expensive, retailing at \$1 an ounce, by weight. In each of the several cases in which I have given the remedy a careful, systematic trial, every other detail in the treatment as to *diet* and *hygiene* being also thoroughly considered, I have had very marked improvement. These cases, however, were selected, none being in the far-advanced stage of the disease. The objective and subjective symptoms were well marked in all, and all had undergone other treatment by different physicians before coming under my care, as these patients were sent to this climate for their health. Two of these patients were under my care previously, at which time I then pursued an entirely different course of treatment. Both had previously taken creosote, from which they in both instances received very little benefit. While under treatment with creosote carbonate they have rapidly improved, and now continue to gain in weight. The advantage of creosote carbonate over the plain creosote is that it is completely assimilated, and can be given in much larger doses, and does not produce, in my experience, any ill effects. To prove that the drug is thoroughly assimilated, the skin and the breath eliminate the characteristic odor, and after long-continued use of the drug the urine presents the usual dark color and odor due to its presence in the urine.

The best mode of administering the drug is to drop it in the yolk of an egg, well-beaten up, and taken after each meal and before retiring at night. I also make use of the white of the egg by having it beaten up in a glass of milk, and taken between meals, with or without wine, as desired. I usually commence with 5 drop doses, and increase 1 drop a dose each day until the patient takes the amount necessary to produce the desired effect. When I arrive at the dose from which the patient himself notices marked improvement, I advise the continuous use of that dose for a week or two without increasing it, but then to again increase 1

drop a day for a week, or until marked signs of improvement again show themselves. The dose then remains uniform for some time. In this way I have had no reason as yet to give beyond 40 drops, although much larger doses have been given. I should not hesitate to increase the dose up to 60 drops should indications demand such a quantity.

As an illustration of the efficacy of this treatment I report the following case:

Mr. G., 33 years old, now a real-estate agent in his city, came under my care two years ago. There was a history of tuberculosis in the family. Two years before coming to Southern California he was afflicted with malarial fever, and about one year later with right-sided pneumonia. A gradual decline in health followed, and he states that after six months his physician advised a change of climate to Arizona, explaining to him that his left lung was also slightly involved. For four months previous to coming here, while in Arizona, he took 10-drop doses of creosote in capsules *t. i. d.* Under this treatment he did not improve. After coming here he continued the creosote for a short time, and the change of climate resulted in a slight improvement in his condition, but for a short time only. He then discontinued all treatment. It was not long, however, before he again commenced to fail in strength, and his health again broke down. It was at this time that he consulted me. I made a thorough examination, and found the upper portion of the right lung and the apex of the left lung involved, well advanced in what I would term the second stage of the disease. Night-sweats were causing a great drain; there were harassing cough and free expectoration, in which many bacilli were present. I at once advised a complete change in his habits, his diet, hygiene, etc., and put him on 10-drop doses of creosote three times daily, and good tonics. He improved a little for a time. He was then manager of a clothing-house, and in this occupation he was advised to make a change. He went into the real-estate business to do outdoor work. With all changes made for his benefit he did not improve, and about ten months ago he had another attack of pneumonia involving the middle lobe of the right lung. This came near taking him "from this earth of misery," as he expressed it, and it was a great struggle for him to gain strength enough to get about. He lost 20 odd pounds in weight. Under the best of care with the former treatment he made very little improvement in general health or in the condition of his lungs. I then put him on creosote carbonate, commencing with 5 drop doses in the yolk of an egg, 4 times daily, and increased the dose until he was taking 15 drops at a dose. In less than two weeks there was marked improvement, and from this time on he has gained now over 20 pounds, or his former weight. Later he took 20, then 30 drops at a dose, and at present is taking 40 drops, four times daily, and beyond this dose there has been no indication for an increase. In less than two months of the creosote-carbonate treatment he was able to resume work, and has been at active work every day since. He is gaining in strength and

weight daily, and is again encouraged and confident that he may live a long and useful life for the benefit of his wife and four children.

The other cases have done equally as well if not better, but were not in so precarious a condition.

The minor details of treatment I pursue in these cases would require too much space to relate, but I would state that the personal habits of every patient are thoroughly investigated in every detail and all faults corrected, so that the patient actually lives a new life.¹ The creosote carbonate I hold, as it were, in reserve, and do not give it promiscuously.

In conclusion it may be said that although this climate is no doubt a helpful agent in the treatment of patients with pulmonary tuberculosis in its earlier stages, yet under other treatment they do not always show very marked gain, or what gain there is in many instances not continued; but under the creosote-carbonate treatment the gain is of a more strengthening character and apparently will prove permanent.

CLINICAL MEMORANDUM.

A CASE OF MILIARY TUBERCULOSIS WITH UNUSUAL SYMPTOMS.

BY CASPAR W. SHARPLES, M.D.,
OF SEATTLE, WASH.

A. B., a male, aged 24, some time in his early life had a mitral murmur which was not present at any time after he came under my observation. In 1891 he went to college in New Haven, taking while there a good deal of exercise. One day after some exertion he had hemoptysis, raising quite a large amount of blood. This was followed by three other copious attacks. Accompanying, or soon following, these hemorrhages, he had pneumonia involving the lower lobe of the right lung. In all he was confined to bed for three weeks. There was also diagnosed at that time tuberculous involvement of the left apex, on account of which he was advised to go to some southern climate, which he did, and by travel and care his condition improved so much that he returned to Seattle to all intents and purposes well.

For the last year or so he worked very steadily on a newspaper as manager, putting in long hours, often late at night, and subjecting himself to more or less exposure. In the meantime he had attacks of iritis and ulcerative keratitis with quite persistent frontal and basilar headache accompanying and following, and it was on account of these that I first saw him in consultation with Dr. Dawson. The next time was for life-insurance purposes, on November 21, 1894, when I found evidences of very moderate consolidation of the apex of the left lung, on account of which I advised his rejection. Some time later he consulted his regular physician, who found some rise in temperature but with no regularity, and advised a change of climate and occupation.

¹ See Article on "The Hygienic and Dietetic Treatment of Consumption, with Reference to Southern California Climate," by Wm. H. Dukeman, in *New England Medical Monthly*, Nov., 1895.

On Friday, March 15, 1895, coming down town he faced a cold piercing wind. It was about 9 A.M. He then had hemoptysis to the extent of about a pint, so far as could be told from his description. On Saturday night following, his temperature was 104°, and Sunday morning it was about 103° all the forenoon. At 11 A.M. of that day he had a second hemorrhage of less than a teacupful. The temperature remained high through and after this. At this time my connection with the case began, on account of the illness of Dr. Dawson.

There are four points in the subsequent history of the case which are of more than ordinary interest, and it is on account of these that I venture to report a case of tuberculosis: 1, the physical signs and the expectorate; 2, the course of the temperature; 3, the action of the heart; 4, the nervous symptoms.

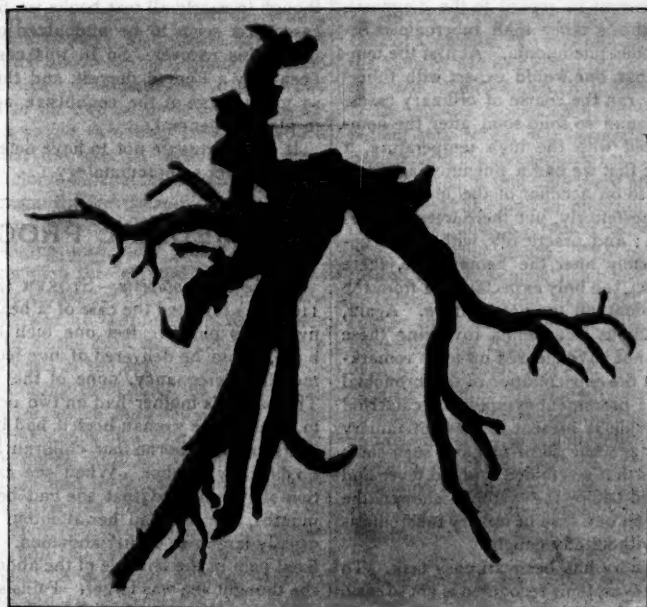
When I first saw the man the respiratory rate was 40, but this soon dropped to 32, remaining at about that rate till midnight of the following day, when it began to fall, coming down as low as 22 on the evening of the next day—the 19th—ranging from that to 26, from that time till the morning of the 22d, when it began to increase again; 28 was the lowest and 58 the highest reached after that period, averaging about 44 for the remainder of his illness. For two days just preceding his death he had a respiratory rhythm that very much resembled the Cheyne-Stokes respiration, which, however, was not constant, for at times he would breathe regularly. Dyspnea never was extreme.

Soon after the last hemorrhage, when I examined his chest there was no expansion at all on the left side, the right consequently expanding the more. Vocal resonance and fremitus were absent over most of the left lung. Percussion gave a very dull note over the left apex, and a flat one over the rest of the left chest, with some impairment over the lower part of the right lung (which, as I understand, had been the seat of the old pneumonia). Auscultation showed that no air was entering the lung excepting a small amount in the apex, where there was bronchial breathing, and at the border of the scapula midway up could be heard very high-pitched but not intense bronchial breathing. But this was all changed as suddenly as it no doubt came, for on Tuesday the 19th, about 11 A.M., he spat up the cast of the bronchial tubes depicted in the accompanying illustration. It appears to have been lodged in the primary bronchus, branching out immediately into the tubes next in size, the smallest pieces being formed in tubes a sixth in size. Assuming that it was formed as a result of the second hemorrhage, it lay where it was formed for 48 hours. The day when this was brought up marks the day of the slowest respiration. The percussion-note also changed. At the apex it remained the same, but over the rest of the lung the resonance was still impaired, but by no means to the extent that it had been. It continued to clear up for the next 24 hours, when it would have been classed as impaired resonance. In three days it again became duller, but never to that degree that characterizes a pneumonia. It so remained until his death. That of the right lung on March 24th became more extended. The respiratory sounds consisted of very intense bronchial breathing over the left apex with mucous râles, while they were not materially altered over other parts of the chest, except for the presence of subcrepitant and mucous râles, chiefly the latter

for the last few days. He coughed very little then, and rarely raised anything; consequently no stains were made.

The temperature on the 16th at night was 104° , and in the morning of the 17th 103° , being up to 104° by midnight, and this with a cold pack constantly around his chest and ice-bags on the outside of the packs. At 8 the next morning it was 104.4° , being in the evening only two-tenths of a degree higher, and so it ran for five days in spite of the constant application of packs and sponging; only once after sponging was his temperature reduced to 102.8° . On the 21st I applied *mxij* of guaiacol to the abdomen, at 9 o'clock in the forenoon, when the temperature was 104.4° , with very little effect. At 1 P.M., with a temperature 104.4° , I applied

pulse was taken as 116, and a few minutes later 68. At noon it was 104, and fell to 60. Once while I was listening to his heart this change occurred. It came with a throb as though the heart had turned over on itself. Once or twice the heart maintained this slow rate for a day. It would change back as suddenly to the rapid rate as it had previously changed to the slow one, sometimes in five minutes, and sometimes not for hours. The rhythm during the times of slow and rapid action was good. The volume was very changeable, sometimes being fairly strong and at others very weak, almost imperceptible. The most marked drop was when the nervous symptoms were severely coming down from 140 to 70, or from 130 to 60, a clear change of rate in a second of 70 beats.



Bronchial cast. Natural size.

to his chest *mx*, with the result of causing the temperature to drop to 99° in four hours, and it also caused a chill that lasted 30 minutes. In two hours more his temperature had again risen to 106° , when I used *mx* of the guaiacol. His temperature at midnight was 100.6° , with another chill less severe than the last. This was the last of the excessively high temperature that was continuous. It was often between 99° and 100° for a long time.

At some previous period he had a mitral systolic murmur, but nothing was present at this time but a pulmonary murmur. At my first visit the pulse was about 100 and regular, of very good volume, everything being considered. On the second day it was so in the morning, ranging from that down to 88, but gradually decreasing in strength till the 22d, or fifth day, when I ordered the infusion of digitalis in half-ounce doses every six hours, without making any marked impression. But on the morning of the 26th, the ninth day, the

The nervous symptoms were not constant. At first there were none, though he slept poorly from the first. On the sixth day he was in a semicomatose condition, or, as the nurse described it, a stupor-like sleep, all day long, followed by periods in which he talked in his sleep or moaned constantly. On the night of the tenth day he was awake all night, while on the next night he slept all night. On the thirteenth day the nurse reported a general convulsion lasting an hour, occurring at four A.M., and between eight and nine o'clock he had a severe tremor of the right side. There were four more convulsive seizures all of which were general for a few minutes, but for most of the time affected only the right side. One of these right-sided affairs I saw, which was like the others. The entire right side was in a state of clonic spasm, with more or less rigidity of the muscles. There was ptosis of the right side and partial paralysis of the face. This condition of the face passed away with the cessation of the other condition. Each of these

convulsive periods lasted three or four hours, and during them the heart was more irregular than at any other time, as was the delirium more marked. But after the three days in which the convulsions occurred his mind again became so clear that he seemed to realize all that was said and done. While jerking so much he perspired as though he had taken a large dose of pilocarpin.

On the seventeenth day he began to vomit, raising large quantities of a dark-colored liquid, far in excess of the amount he drank. It was to all appearances like beef-tea, and for thirty-six hours very offensive, being nearly fecal in odor. At the same time he retained nothing by the rectum. This continued until his death, except that the odor of the vomited matter was less offensive and the color changed to green.

There may be a question in regard to the diagnosis, the only possible diagnosis other than tuberculosis being catarrhal or croupous pneumonia. At first the temperature was higher than one would expect with tuberculosis, though it later ran the course of ordinary cases. When the lung was found so solid soon after the hemorrhage and associated with the high temperature, it seemed very probable that we had a pneumonia to deal with, and the more so on account of the high-pitched bronchial breathing posteriorly, but there were no râles over all this dull area; and practically, with the exception of that immediately after the hemorrhage, there was no cough. In fact, the only expectoration from the lung was that dependent on the hemorrhage. Again, had there been a croupous pneumonia involving these areas the lung would not have cleared up to so remarkable a degree just after the expectoration of this bronchial cast. Cough, too, is a prominent symptom of catarrhal pneumonia, and as a rule is present in cases of miliary tuberculosis of the lungs; but all of us have seen cases of miliary tuberculosis that resembled typhoid fever and were so diagnosed before the autopsy showed the difference. I have seen one case of miliary tuberculosis that was practically without any cough.

To recount this history has been an easy task. To accurately explain the symptoms recounted is not so easy, and at any rate must be pure theory. However he may have acquired it, the man had four years ago a pulmonary tuberculosis, whose activity was checked by proper hygienic and climatic influences till this winter, when it again started up, and on top of it all came this sudden outbreak of miliary tubercles, ushered in by the hemorrhages. The apical bronchial breathing was due to the tuberculous inflammation at the apex. The high-pitched bronchial breathing posteriorly was due to the small amount of air passing by the plug formed in the bronchial tubes from the clotted blood. The absence of the breath-sounds and the flat percussion-note of the other areas of the lung were due to the air-supply having been cut off by this bronchial plug. The expectoration of this plug explains the reappearance of resonance and breath-sounds. In the râles there was no peculiarity.

The temperature was remarkably high, and no doubt depended simply on the tuberculous trouble.

The action of the heart was peculiar. The irregularities did not appear until three or four days after the man had had a couple of ounces of the infusion of digitalis a day. However, I do not think that the digitalis

could be held accountable for this action, since its effect is to steady a heart, decrease its rate, and increase its force. This heart was not steadied, its rate was not permanently decreased, nor was the pulse fuller and stronger when this decrease in rate occurred; on the contrary, it was often weakened.

It seems possible or probable that there was a tuberculous inflammation around the base of the brain, and that the vagus nerve was either in its origin or course involved or irritated by this tuberculous deposit, and so the heart was made irregular. Yet there are shortcomings in such an idea as this that I cannot bridge over. The convulsive actions, general and unilateral, seem to have depended on tuberculous deposit at the base of the brain, as would also the ptosis and the inequality of the pupils. That these should have passed off is rather remarkable, though in nearly all text-books we find a statement that cases that seem to be undoubted ones of tuberculous meningitis recover. So in this case there may have been only a limited deposit, and this the more so since so much more of the convulsive action was unilateral in place of general.

It is unfortunate not to have determined the cause of such a queer symptomatology.

MEDICAL PROGRESS.

A Case of Quintuplets.—STOKER (*Lancet*, No. 3767, p. 1164) has reported the case of a healthy woman, thirty-five years old, five feet one inch high, and of slight build, whom he delivered of five fetuses in the seventh month of pregnancy, none of the children surviving. The patient's mother had on two occasions given birth to twins. The woman herself had been married for six years and had borne four children at full term, having no difficulty in labor. When she came under observation she computed that she had been pregnant for six months, and had had her attention attracted to the unusually large size of her abdomen. She complained of fixed pain in the left side of the abdomen, on which side she thought she was larger. Pains set in with regularity and the labor lasted eight-and-three-quarters hours. After the rupture of the membranes the first child presented by the shoulder. Version was readily performed; the child was dead (recently). Examination after the birth of the first child disclosed the existence of more than one remaining fetus. The membranes protruded and became tense with each contraction. The presentation was a transverse one. In this case also there was little difficulty in effecting internal version. The child lived a couple of hours. The third fetus was also enclosed in a separate sac which had to be ruptured. The child presented by the breech and was delivered naturally, and lived for an hour. In the fourth case, too, the membranes had to be ruptured, and alarming hemorrhage ensued. Version was at once practised, but the chin became locked with that of the remaining fetus. There was some difficulty and considerable delay in freeing the children, though the extent of locking was not at any time formidable. The child was dead (recently). The fifth fetus presented by the head and was delivered naturally. It lived for half an hour. The placenta was delivered about five minutes after the birth of the last child, and consisted of two portions united by

a narrow isthmus. One, the smaller, had two cords attached centrally and close together; the other, and larger, had two cords attached in a similar way and one where it was joined to the isthmus. The organ appeared to be perfectly healthy. The cord of the fourth child was so short that it had to be ligated in the vagina. The children were all females, and much about the same size, making a total weight of eight pounds. The mother rallied quickly and got on well.

A Case of Spontaneous Gluteal Aneurysm.—DELAUP (*New Orleans Medical and Surgical Journal*, vol. xxiii, No. 5, p. 257) has reported the case of a strong, well-developed, seemingly healthy negro, 21 years old, who complained of a pulsating tumor of the right buttock, which disabled him from hard work. On examination an irregularly defined, fluctuating, elastic, pulsating tumor, unattended with inflammatory symptoms, was found situated about an inch above the right gluteal fold and nearer the median line. The patient's attention had first been attracted to his trouble about three years before, when he felt a vague, throbbing sensation and a feeling of heat about the affected region after severe muscular exertion. Some time later he noticed a swelling, which grew constantly and steadily. The expansion of the tumor was especially marked at its lower part, where the bulging was most prominent. The right thigh was larger than the left, and the upper and inner branches of the saphenous vein were much dilated and varicose. There was no diminution in the volume and force of the pulse of the right leg as compared with the corresponding vessels of the opposite side. On palpation, a distinct vibrating thrill could be felt over the lower part of the tumor, which imparted also a sense of heat and had the consistence of a cyst. forcible digital pressure at the upper third of Nélaton's line restrained both pulsation and thrill, as did also pressure with the closed fist over the abdominal aorta. The patient stated that there had been a birthmark in the region of the tumor, and the skin in this situation was darker than elsewhere. A diagnosis of arterio-venous aneurysm was made and an external operation undertaken, which was, however, not successful, from failure to secure the gluteal artery. Extraperitoneal ligation of the internal iliac artery was proposed for a subsequent occasion, but the patient failed to put in an appearance at the proper time.

The Treatment of Invagination of the Bowel.—As the result of a careful study, RYDYGIER (*Deutsche Zeitschr. für Chirurgie*, B. xlii, H. 1, 2, p. 101) arrives at the conclusion that in cases of acute invagination of the bowel operation should at once be resorted to as soon as bloodless therapeutic measures, thoroughly employed, have proved fruitless. After celiotomy has been effected, disinvagination should be undertaken unless contraindicated by unusual difficulties. If the condition of the walls of the bowel, especially at the point of invagination, is suspicious, a strip of iodoform-gauze is to be passed to this situation or the affected part is to be placed external to the abdomen. When disinvagination is not feasible, resection of the invaginated portion is the least serious operative measure. Resection of the entire invagination is to be undertaken when the invaginating sheath presents decided changes in the walls and perforation

is threatened. The establishment of an artificial anus and enteroanastomosis are usually not applicable in the treatment of acute invagination of the bowel; the former would only be allowable in case of profound collapse. In the treatment of chronic invagination bloodless measures should at first be employed repeatedly, but not over too long a period. The interval after an attack is the best time for the performance of a surgical operation for the relief of the invagination. After celiotomy has been done, disinvagination is to be attempted. In the event of its failure, resection of the invaginated portion is to be preferred over other operations.

Acute Yellow Atrophy of the Liver Following Torsion of the Pedicle of an Ovarian Cyst.—STOCKER (*Centralbl. für Gynäkologie*, 1895, No. 45, p. 1181) has reported the case of a woman, 25 years old, in whom, six weeks after the birth of her first child, the existence of an ovarian cyst was detected, which gradually increased in size. Operation was agreed upon, but before the time set the patient was seized with symptoms of twisting of the pedicle, and the temperature rose slightly. Upon opening the abdomen at this time there presented a bluish-black cystic tumor as large as an adult head and attached to the ovary. Douglas' pouch contained a small quantity of hemorrhagic serum. The pedicle of the cyst was twisted four times upon itself and was also bluish-black in color. The tumor was readily removed, but death ensued three days after the operation, being preceded by restlessness, sleeplessness, and coma. The secretion of urine was scanty and examination disclosed the presence of albumin. Finally, toward the close, jaundice appeared. Upon postmortem examination no abnormality was found in the field of operation. The liver, however, was small, flabby, and of striking yellow color, punctuated with numerous red spots. The kidneys were swollen. In the urine were found crystals of leucin and tyrosin.

Acute Glossitis due to Urticaria.—HAMILTON (*Medical Press and Circular*, No. 2949, p. 494) has reported the case of a man, 42 years old, who, during a period of eight years, was from time to time seized with attacks in which the tongue became swollen and thickened and protruded an inch beyond the edge of the teeth, together with thickening and swelling of the submental region. There were also scattered spots of urticaria in various situations. The swelling usually subsided in a short time. On one occasion it was necessary to incise the tongue on the sides to prevent suffocation. The attacks could be controlled by the sucking of ice. The patient always felt a bald-like spot on his tongue in anticipation of the swelling. To induce sweating, sodium salicylate and an infusion of pilocarpus were administered, and the attacks were for a time controlled. The seizures sometimes, though not always, followed the eating of fish or oysters and even the smoking of a cigaret. They yielded most readily to subcutaneous injections of pilocarpin.

Blastomycetes in Sarcomata.—RONCALI (*Centralbl. für Bakteriologie und Parasitenk.*, B. xviii, No. 14, 15, p. 432) relates that in five sarcomata, arising in three different situations and from different tissues, he found in vary-

ing numbers, but constantly, parasitic bodies, which he designates blastomycetes. These resemble the bodies already described as present in adeno-carcinomata of the ovary, and stain in a specific manner, resisting the action of alkalies and acids. The parasites may be located within and without the cells, and exceptionally within the nuclei. They multiply by budding, and may be encountered at an early stage—that is, free from membrane and containing an abundance of chromatic protoplasm; or even at an advanced stage—that is, with a thick membrane and containing slightly chromatic, variably granular protoplasm; or finally with or without such protoplasm as has lost the property of staining with anilin colors.

The Relation between Phagocytosis and Immunity.—As a result of an experimental investigation into the phenomena induced by corneal inoculation with anthrax-bacilli in susceptible and refractory animals, LIAKHOVETSKY (*Archives des Sciences Biologiques*, T. iv, No. 1, p. 42), while admitting the existence of phagocytosis in animals susceptible to anthrax and attributing to this condition an essential rôle in the process of establishing resistance in individuals inoculated with the virus of anthrax, contends that it must be recognized at the same time that immunity is far from being determined by phagocytosis solely. Phagocytosis represents only one of the general functions of the animal organism, quite independently of its susceptibility or resistance to anthrax, and the intensity of which is at times in inverse proportion to the degree of immunity.

Persistent Secretion of Gastric Juice.—BOAS (*Berliner klinische Wochenschrift*, 1895, No. 46, p. 1001) expresses the opinion that persistent secretion of gastric juice is in most cases not a definite disease, but an accompaniment or sequel of other well-recognized disorders. It many cases it is a result of motor insufficiency. Practically a distinction is to be made between a natural and an artificial excessive secretion of gastric juice. When motor insufficiency is recognized it should be treated, and with its disappearance the excessive secretion ceases. When pyloric stenosis acts as a cause, the two conditions can be relieved by operation.

A Young Mother.—GLEAVES (*Medical Record*, No. 1306, p. 715) has reported the case of a girl who gave birth to a well-formed child at the age of ten years and two months. The girl lacked the development of a woman, although she had menstruated regularly from the age of five years. The labor was short and uneventful, and two hours afterward the girl wanted to get up and dress. The mammary glands were undeveloped, and there was no secretion of milk. The infant lived a week, being nourished by its grandmother, who was nursing a child a few months old.

THERAPEUTIC NOTES.

Fatal Poisoning with Phenacetin.—KRÖNIG (*Berliner klinische Wochenschrift*, 1895, No. 46, p. 998) has reported the case of a boy, seventeen years old, who looked ill and depressed, and complained of pain re-

ferred to the occiput and also to the right hypochondrium. The face and body presented a dirty-yellow or ashy-gray color; the conjunctivæ were also yellowish, and the lips were cyanotic. The temperature was slightly elevated and pulse and respiration accelerated. The liver was a little enlarged and of increased consistency; the spleen considerably enlarged and of normal consistency. There was a purulent discharge from the right ear, with perforation of the tympanic membrane. A diagnosis of septicemia of undetermined origin had been made, but the peculiar aspect of the patient suggested some form of intoxication attended with blood-destruction. Examination of the blood disclosed, in addition to an increased number of white corpuscles (mononuclear equally with polynuclear), destructive changes in the red cells—a true erythrolisis. Upon further inquiry it was now learned that the patient had received for the relief of occipital pain five powders of phenacetin of 15 grains each, of which he was to take one during the attack, but not more than two in twenty-four hours. After taking the fifth powder, at the end of three weeks, the patient was seized with vomiting, and a bluish-gray color of the face and lips was observed. The bowels became loose and the urine assumed the color of chocolate. Finally the skin generally presented a yellowish hue, while the lips, ears, hands, and feet became cyanotic in color. Death took place, and the post-mortem examination confirmed the diagnosis of septicemia, together with universal methemoglobinuria. Spleen and liver presented pronounced brownish discoloration. The kidneys were enlarged and discolored and the seat of hemorrhage. The lower lobe of each lung was pneumonic. The gastric mucous membrane close to the pylorus was the seat of an irregular ulcer.

For Chronic Pyelitis.—

Take of

Benzoic acid 3 grains.
Theriaca 1½ " —M.

Two pills from two to four times a day.

Or, take of

Sodium benzoate 3j.
Sirup of raspberry f 3j.
Distilled water f 3ij. —M.

A dessertspoonful three hours after each meal.

Or, take of

Venetian turpentine } aa 3iss.
Powdered camphor }
Extract of opium 5 grains.
Extract of aconite-root 5 " —M.

Divide into twenty pills. One every eight hours with a small cup of decoction of *uva ursæ*.

—ROBIN, *Sem. Méd.*; *Progrès Méd.*, No. 46.

For Whooping-cough.

Take of

Infusion of belladonna-leaves
(7½ grains) in distilled water f 3vj.
Antipyrin gr. xv.
Simple sirup f 3j. —M.

A teaspoonful every two hours.

—ESCHLE, *Médecine Moderne*, No. 92.

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RUPTURES OF THE PANCREAS AND THEIR RELATION TO PANCREATIC CYSTS.

DURING the past few years much information that is interesting and important has been added to our knowledge of the morbid changes occurring in the pancreas. Since the appearance of Fitz's Middleton-Goldsmith lectures acute inflammatory affections of this organ have received a good deal of attention. Little, however, has been written on rupture of the pancreas, and there is scarcely a surgical text-book that even alludes to the subject. Leith, of Edinburgh, in an excellent article which appeared recently in the *Lancet*, has thoroughly reviewed the subject and has contributed much valuable information to our knowledge of the relationship of pancreatic cysts to ruptures of the pancreas.

When one considers how thoroughly the pancreas is protected from traumatism, it is not surprising that rupture is so rare. The gland lies transversely across the posterior abdominal wall about on a level with the first lumbar vertebra, this corresponding very closely to a line drawn across the anterior abdominal wall about three inches above the umbilicus. Posteriorly, and from the sides, the pancreas is completely protected from injury by the bony framework of the chest, so that, for any

violence to do injury to it, the point of impact must be over a very limited area in the epigastrium, and the force must be expended directly backward in the median line in order that the pancreas may be crushed between the object producing the violence and the unyielding vertebral column. Rupture of the pancreas seldom occurs unassociated with injury of some of the other abdominal viscera, owing to its being more or less protected by them. Leith has collected from the literature seven cases of rupture which terminated fatally a few hours after the injury. Two cases that he himself reports make a total of nine, and in only two of these was rupture of the gland found unassociated with injury of any other organ.

The symptoms following rupture are not at all well defined, and this is rather remarkable when one considers how definite and characteristic are the local signs in acute pancreatitis. The chief symptoms are collapse and shock, which come on almost immediately and are mainly due to bleeding. The hemorrhage takes place chiefly from the organs that are ruptured in addition to the pancreas, hemorrhage from the pancreas alone being very slight, unless the splenic artery and vein are torn. From a medicolegal standpoint it is interesting to know that in none of the fatal cases have there been any evidences of external injury.

Owing to the absence of any localized symptoms it is practically impossible to make a diagnosis with any degree of certainty. Leith claims that the pancreas can be thoroughly explored by the finger introduced through an incision three inches long to the left of the median line in the epigastric region, and that it is only by this means that we are able to make a positive diagnosis.

A fatal result need not necessarily follow rupture of the pancreas. At varying intervals after the occurrence of an injury received in the epigastrium, cystic tumors have been found to be present in this region, and the chief interest in Leith's article centers on the relation of these cysts to ruptures of the gland. Leith has collected from the literature seventeen cases of pancreatic cysts in which there was a history of traumatism. That all these cases were true pancreatic cysts it is impossible to say with certainty. A considerable number of them were undoubtedly such, as the fluid obtained by aspiration gave the reactions characteristic of the pancreatic juice when submitted to chemical analysis. The interval that elapsed after the

injury, before evidence of a cyst appeared in the epigastrium, varied a great deal. The shortest time was ten days and the longest eight years. The greater portion of them, however, appeared between two weeks and four months after the injury.

There have been many conjectures as to the mode of origin of these cysts. Kuhlenkampff held that the injury caused an inflammation of the gland-substance which led to a closure of the duct, with the consequent formation of a retention-cyst. Senn, although he at first held this view, found from experimental work on animals that obliteration of the main duct was not followed by much distention, and that really the part of the gland thus physiologically cut off from the main duct underwent simple atrophy. He then formulated three main hypotheses, as he considered that the cyst might be formed in various ways: (1) by hemorrhage into a preexisting pancreatic cyst; (2) by parenchymatous hemorrhage producing a cyst, followed by hemorrhage into the cyst-wall; and (3) by a dilatation of one of the bloodvessels of the pancreas. The second view seems to be the most probable one, and is supported by Cathcart, Lloyd, and Leith himself. Cathcart explains the process more fully, and holds that the laceration of the gland is followed by an extravasation of blood, which becomes mixed with secretions from the torn pancreatic ducts. The cystic tumor gradually increases in size owing to the secretion poured from the pancreatic ducts, and owing to the irritating character of the mixed fluid a capsule forms about it, so that a definite cystic tumor is formed.

There are several conditions that may simulate a traumatic pancreatic cyst very closely, as, for example, a pancreatic cyst of spontaneous origin. Spontaneous hemorrhage may take place into the substance of the gland, finally leading to rupture of some of the pancreatic ducts, with a consequent admixture of pancreatic juice with the extravasated blood, and leading to a cyst which it would be practically impossible to diagnosticate from one of traumatic origin. Again, as Fischer suggests, a spontaneous hemorrhage may occur in the neighborhood of the pancreas, and the effused blood, by pressure on the pancreas, lead to atrophy of this gland, with an escape of pancreatic juice from some of the opened ducts. Here it is obvious that the resemblance to a traumatic pancreatic cyst will be striking.

It is well recognized that the peritoneum in its

various reflections, particularly the lesser omentum, is a fruitful source of cystic formation. Quite a number of other instances might be enumerated in which pathologic changes distinct from the pancreas simulate closely traumatic cysts of that organ, but sufficient has been said to show that it is extremely difficult to say positively whether we are dealing with a traumatic pancreatic cyst or with one of some other origin.

Chemical analysis of the contents of the cyst will aid materially in the diagnosis. Reactions characteristic of the pancreatic juice afford strong evidence in favor of the cyst being pancreatic in origin and of the traumatic variety, if there has been an injury. The failure to obtain the reaction for the pancreatic juice does not definitely exclude the condition, as it has been found that the contents of the cyst become materially altered after a time. Leith therefore suggests that the term "epigastric" rather than the term "pancreatic" be used for any cyst of doubtful origin which occupies the epigastric region.

In a case in which severe shock and collapse follow an injury in the epigastric region, the expectant plan of treatment, as absolute rest, and the application of ice to the abdomen, must be adopted unless a celiotomy be performed. If an exploratory incision be made and a rupture of the pancreas be found, Leith recommends the application of pressure to stop the hemorrhage, and then that the ruptured ends of the glands be coapted by means of sutures passed superficially through the capsule which is closely adherent to the gland-substance. This may result, however, in the collection of blood and pancreatic juice between the ruptured ends of the gland, leading finally to the production of a cyst. Senn has proposed to obviate this danger by first ligating both ends of the ruptured gland and then bringing them together by means of sutures as already indicated. He found that glands treated in this way healed rapidly without the formation of any cysts in the distal portion, as all portions of a gland thus physiologically separated from the rest of the gland undergo simple atrophy.

With regard to the treatment of pancreatic cysts, aspiration has not proved a success, as it has been found that the cyst almost invariably refills. Consequently at the present day celiotomy is the favorite treatment, the cyst being brought forward to the abdominal wall, incised, emptied, and drained. This was the method used in all the seventeen cases

Leith collected from the literature, in all of which except one it was successful. Drainage through an anterior incision is not thorough, and occasionally an obstinate fistula follows. Cathcart and Littlewood suggested that the cyst might be opened from behind. Leith, acting on this suggestion, experimented on the cadaver and found that it was not at all difficult to reach the tail of the pancreas and enter the lesser peritoneal cavity through a posterior incision three inches long on the outer side of the "left rectus," beginning above at the twelfth rib. As evidence in favor of the efficacy of this method, Gould had a case in which an obstinate fistula followed the opening of the cyst through the anterior incision, which, however, rapidly healed after making a counter-opening behind.

POPULAR SUPERSTITION AS TO PREMATURE BURIAL.

THERE are probably few more generally felt dreads than that of being buried before life is extinct; and this fear is fostered by a huge assortment of gruesome tales of alleged instances of this mishap. The well-known story, for instance, of the skeleton that was found on exhumation years after burial, with its bony hands full of its own hair, or the still more celebrated one that appears in some form in every language and literature, of the lady buried with a valuable ring who was brought to life by the rascally servant cutting her finger in order to remove the ring. The medical profession has never placed much confidence in these weird tales, although they are implicitly believed by the laity. An English newspaper has recently been trying to create sensation for the dull season by denouncing the profession for its skepticism and its failure to invent or agree upon some absolutely unmistakable sign, test, or proof of death. More than this, the accusation is made of intentional disbelief and of an endeavor to suppress and discourage belief in such stories, because they impeach the infallibility of medical diagnosis and death-certificates, and destroy public confidence in medical wisdom. According to this judgment the professional position may be thus expressed: "If we say a man is dead, he must be dead, and anyone who contradicts the statement tells an untruth."

The medical profession is denounced for never having taken the trouble to discover some absolute and reliable sign of death, which, it is argued,

the profession does not care for, because people are always buried out of sight as soon as life is pronounced extinct, and they can never come back to expose the mistake. According to the same authority there is one absolute and infallible sign to which our noses would have led us long ago if we had but taken the trouble to follow them, and that is decomposition. Unfortunately for this assumption, however, this sign may appear in any part of the body to almost any extent, and involve a large part of either the external or the internal body-surface long before death, as the merest tyro knows who has seen a case of hospital-gangrene, of membranous dysentery, of phagedena, or pemphigus. It is, however, a striking commentary on the vagueness of the line that divides living from dead matter that, after all these centuries of investigation, no one, nay, no two, signs can be designated, the presence of which absolutely indicates death and the absence of which positively proves life.

Nevertheless we venture the statement that, except in war-time, cases of premature burial have been and are extremely rare, and will be practically impossible in the future. In the first place, nearly all the reports of such incidents are of a luridly sensational and dramatic character, and either highly improbable in themselves or utterly unsupported by adequate evidence.

In a recent conversation a prominent undertaker, a man of national reputation in his guild, stated that he had carefully studied this question for a number of years past, and through his editorial connection with two trade-journals he had either investigated personally or had caused to be investigated every report of premature burial in the United States for the past ten years. The reports were numerous and highly colored, but in every instance they were found upon examination on the spot to be absolutely devoid of adequate foundation—in short, to use his own expressive words, to be "pure fakes." From what he had been able to glean of the history of such occurrences in the past, he was inclined to regard the vast majority of such reports as mere folk-stories and legends.

So much for the external supporting evidence of the occurrence of premature burial. The statement is both an expert and a judicial one, for even the most vividly suspicious lay mind could hardly regard an undertaker as likely to be prejudiced or biased in his view of the question.

As to the internal evidence, in nearly all of these weird stories, the chief dramatic incident and the principal proof of their claim to consideration are found in active and often vigorous muscular movement on the part of the buried body, escape from the vault or tomb in some cases, and in others the discovery of the skeleton in an attitude indicative of struggling and efforts to escape. No touch is omitted that might heighten the imagined horrors of the situation and the agonies of the victim in his hopeless struggle. Now, a moment's consideration of the physiology of the situation will show that such occurrences are not only highly improbable, but practically impossible under the circumstances. All bodily activity depends upon combustion, and combustion requires abundance of oxygen. What are the mathematics of the situation? The amount of carbon dioxid given off by the average man in the process of quiet respiration is 0.6 cubic feet per hour, and whenever the proportion of this gas reaches 20 parts in 10,000, the air becomes highly injurious to life, and when a proportion of 40 parts per 10,000 is reached death rapidly ensues. Now, the internal dimensions of the average coffin or casket are about 6 feet long, by 2 feet wide, by 18 inches deep, rather under than over these measurements giving an air-space of 18 cubic feet, of which the body occupies at least one-third, leaving only 12 cubic feet of clear air-space. A proportion of only 40 parts per 10,000 equals $\frac{1}{250}$, which multiplied by 12 gives roughly $\frac{1}{20}$ cubic feet as the amount of carbon dioxid that would render the air in a coffin rapidly fatal to life. But at the rate of 0.6 cubic feet per hour it is evident that this density would be reached in one-twelfth of this time, viz., in five minutes.

The ordinary coffin, moreover, still retains the traces of an origin that has long been otherwise forgotten, in both its peculiar "coffin-shape" and its tightness, viz., the original Norse custom of burying the dead in boats or galleys sent out to sea at sunset; so that the amount of air that can penetrate its joints when the lid is screwed down is extremely small. The modern casket, it is true, has lost the peculiar shape, but has added to the tightness, and, indeed, ability to render it air-tight is an especial boast. Granting, however, the highly improbable condition that one-half the carbon dioxid diffuses through these chinks as fast as it is expired, we would still be confronted by the fact that the air in a coffin in which a breathing body is enclosed would be a rapidly fatal narcotic poison

within ten minutes after the lid has been fastened down—in fact, before it can be lifted into the hearse. This has been actually proved in a most ghastly manner in several curious cases, most notably in Frederick the Great's attempt to kidnap a Scotch carpenter, of gigantic stature, for his celebrated Grenadier Guards. The man was entrapped by being given an order for a coffin for a fictitious individual, several inches shorter than himself. When completed it was declared too small, and the indignant carpenter was induced to lie down in it himself, to show that it even was larger than ordered. He was at once overpowered, the lid nailed down, and the coffin carried rapidly to a deserted house, where it was opened only to find that the poor fellow was asphyxiated, although he had been confined in the box for but a very short time.

It is popularly supposed that in cases of suspended animation or trance, when there is a danger of living burial, both breathing and the heart-action are entirely suspended, but the general opinion of physiologic authorities denies this entirely. Although breathing may be so light and shallow as to be really imperceptible by ordinary tests, yet some degree of respiration and oxidation must persist as long as life lasts. In the case of bears and other hibernating animals and their human descendants, trance-sleeping dervishes, while vital metabolism, with its oxidation, is reduced to a very low ebb for a considerable period, yet it does continue steadily, as the markedly reduced weight of both bears and men testifies. Whenever oxidation, vital or otherwise, occurs, carbon dioxid is formed; so that even admitting the additional possibility of the volume of respiration being diminished to one-fifth of the normal, we still find that within fifty minutes from the time of fastening down the coffin-lid the most vigorous subject would be asphyxiated, and within one-half the time comatose—in fact, long before the funeral-procession could reach the grave. Yet nearly every one of the legends dealing with premature burial depends for its possible veracity upon feats of muscular strength performed hours and days after burial. Even supposing, to take an extreme case, that a person in a state of temporary unconsciousness from a blow on the head were placed in an ordinary coffin and the lid screwed down, he would simply be narcotized by a rapid and painless process, and become unconscious from that cause within five minutes and die within fifteen or twenty minutes. There is absolutely nothing about the

process to provoke a return to consciousness. On the contrary, many a man has been fatally poisoned by the gradual formation of this gas in his bedroom, not only during sleep, but while awake and engaged in reading or undressing. In the case we are considering we have to deal with not only carbon dioxid, but also several other more poisonous gases formed at the same time with it.

In fine, no one need have any fear of being buried alive as coffins are at present constructed, and even if placed in the casket before life is extinct no return to consciousness is possible, and, it may be added, it is not so much being buried alive that people dread as the waking up and finding themselves buried. That this fear is a genuine and widely spread one there can be no question. Indeed, one enterprising firm has actually devised an elaborate and expensive mechanism to prevent the possibility of such mishap. The casket is provided with air-holes and the lid is so fastened down that the lightest pressure from inside throws it off by means of springs. This, instead of being placed in contact with the earth, is enclosed in a vaulted steel chamber six feet high and nine feet long, so that the "resurrected" may not only stand up, but may also walk about in it. An abundant supply of air is provided by metallic ventilation-shafts that pass up at each end to some distance above the surface of the ground, while the same spring that throws off the coffin-lid presses an electric button connected by a wire with a large gong in the house of the sexton or care-taker; though whether it indicates the number of the grave and the nature of the occupant, and his wishes as to ice-water or towels, etc., we are not informed. The apparatus is most elaborate and costs some two-hundred or three-hundred dollars, and yet so vivid is the dread of being buried alive that a considerable sale is reported already by the inventors.

Should any of our patients still retain some nervous doubt on this head that cannot be dispelled by respiratory mathematics, there is yet another safeguard that we can assure them is absolute. This consists in the modern methods of preparing bodies for burial, commonly known as embalming. There are various processes, but all essentially consist in injecting into the veins a strong solution of some preservative, such as mercuric chlorid or sodium arsenite, with which the tissues are literally saturated, at least one-hundred times the fatal dose being used in every instance. Further than this, in a very ingenious method of preventing postmortem discoloration of

the corpse, a long flexible canula is introduced, by one of the basilar veins, into the right auricle and the venous system is as completely emptied as possible by aspiration. In short, as a well-known embalmer has remarked, he would guarantee any of his subjects against coming to life again. "If by any chance they are not dead when they come into my hands, they are before I get through."

When to the sufficient safeguards of professional skill and watchful relatives can be added the proceedings of the embalmer and the air-tight coffin, the phantom of premature burial, which has walked so many centuries, ought to be laid at last in the limbo of exploded superstitions, where it really belongs.

EDITORIAL COMMENTS.

"Toxin," a Novel.—A remarkable novel has recently appeared written by the famous "Ouida." It is "an up-to-date" affair, and is called "Toxin," receiving its title from the fact that the toxin of diphtheria is employed by the villain to rid himself of his rival.

This in itself would hardly suffice to attract our attention, since novelists from time immemorial have made use of powerful and strange drugs to dispose of their victims, but the villain happens to be an experimental physiologist, who has been much engaged in scientific research, and so the authoress, who has evidently joined the antivivisectionists, makes a fierce attack not only on those who directly make use of the lower animals for experiment, but her words are levelled against scientists in general; her villain is taken as the type of the modern man of science. He is a man without humanity, cruel, unsympathetic, knowing no other law than his own necessity.

The man of science of to-day, according to "Ouida," uses his wisdom as tyrants in former ages used their brute force. Speaking of him she says:

"The infliction of death was nothing to him. He was used to kill as he was used to torture, with profound indifference, with no more hesitation than he ate or drank, or fulfilled any natural function of his body. To obtain knowledge, even the approach of knowledge, he would inflict the most agonizing and most endless suffering without a moment's doubt or regret."

From his boyhood upward he had always lived in the "hells" created by modern science, "wherein the bodies of animals suffer, the souls of men wither and perish."

And so the scientist does not hesitate to inject into the veins of his sleeping friend, who was recovering from diphtheria, the toxin of the disease instead of the anti-toxin, for, as the writer states, "what was the man lying sleeping there to him? Only an organism like those which daily he broke up and destroyed and threw aside. His professional conscience, which would have shrunk from giving the disease, did not shrink from making death certain where it was merely possible. He did but add a stronger poison to that which nature had already poisoned."

According to "Ouida," for the scientist there is no such thing as crime or virtue, "only lesions of the brain and absence of temptation and opportunity." And so "there is no sanctity in life for the wise man; to kill a man who stood in his way was no more than to kill a mole." Of course, the modern man of science is a woman-hater; "he likes her best on the operating-table," and the villain in the story does not love the woman for whom he kills his rival, he merely wishes to have the satisfaction of dominating over her, and though she marries him it is a sort of hypnotic influence that forces her to it. All this brutality, according to the authoress, is engendered by the modern scientific laboratories, which "justify and make permissible any action, providing the catastrophe is deemed necessary to the operator." The doctor in the story is asked "if creatures to interest him must not suffer?" and he coolly replies "certainly;" and again he is asked if "there are not many men of science, many surgeons whose desire is to console, who care for the poor human material on which they work?" and the answer comes, "there are some, but they are not in the front ranks of their profession, nor will science ever owe them much."

What a libel on the noble men of science who have given their lives and their comfort, who have toiled day and night, that coming generations of men might have less sorrow among them. No mercy in science, no kindness, only egotistic brutality. Wrapping herself in the dignity of a prophetess, the antiscentist exclaims that "the time is nigh at hand when there will be no priests and kings but those of science, and beneath their feet the nations will grovel in terror and writhe in death." We poor votaries of science had no idea that the reign of the kingdom of reason was so near at hand. We have been content to let others enjoy the good things of the earth while we starved and toiled; but if we are coming to our inheritance at last, and will have unlimited power, let us not worry any longer about the antivaccinists and the antivivisectionists. We will reserve them for the time when we can use them for experiment.

We would advise "Ouida" to organize an *antiscent* society, have the hands on the dial of progress turned back a few centuries, and any addition to our knowledge considered an offence punishable by death—the only form of cruelty permissible that of man to man. It is, indeed, a new teaching that would have us believe that all the strivings of a Claude Bernard, a Pasteur, a Virchow, and a Koch, served merely to gratify their own brutish, murderous tastes; that they were born murderers. No doubt Lombroso will be called in to show the stigmata of degeneracy in them, and the experimentalist will have his lineage traced back to the priests of the Inquisition, or perhaps to the cannibals, from whom it will be shown he inherited his terrible cruelty.

It is a very common idea among the laity that the surgeon loves to use his knife, and cares naught for the patient, and this popular idea has been taken hold of and fitted together with a few stock antivivisection-phrases, and applied by the writer to the whole of science. We hope that science will recover from this terrible attack.

Illegitimacy.—Thirty-five per cent. of the children born annually in the city of Vienna are illegitimate. According to the official statement, out of 46,000 births

16,500 are born out of legal wedlock. How does this compare with other cities and countries? In *Virchow's Jahrsbericht* we find that in 1893 in the whole of Germany there were 1,928,270 births, of which 176,352 were illegitimate, or 9.15 per cent., and in ten years previously the annual average was 9.29 per cent.

Bertillon claims that in Paris 80,000 families are living in harmony, although in a legal sense the parents have not entered into marriage. In all France, in 1893, 8 per cent. of births were illegitimate. In separate provinces of Germany, Königsberg for instance, which is near the Russian frontier, 10 per cent. of the births are illegitimate, whereas the province Posen, with its population largely composed of Poles, returns 9 per cent. in the cities and 5 per cent. in the villages. Hamburg, a seaport, has a rate of 11 per cent., while Stuttgart, in the southern part of Germany, returns 20 per cent. of illegitimate births.

In European countries some attempt is made to procure accurate returns on this and other questions in vital statistics, and consequently the figures presented are in some accordance with the exact condition of affairs; but in the United States we have no way of knowing anything about the subject, although most large cities pretend to keep records relating to the matter. In Philadelphia the Registrar of Vital Statistics records every birth as illegitimate in which the name of the father is not given, but as some 10,000 births fail to be registered each year, and as undoubtedly many of these are illegitimate, the figures published have little or no value. Thus in the last ten years 2 per cent. of the births registered are set down as born out of wedlock, the rate varying but little each year. In New York City statistics on illegitimacy have only been collected since 1891, and are still very incomplete; the birth-returns are likewise lacking in completeness. In 1894, 1069 births were recorded as illegitimate, or 1.9 per cent. of the total number registered. Cincinnati records 1.4 per cent. In the States of Vermont, Massachusetts, Rhode Island, and Connecticut the rate is 1.3 per cent., but here also the returns are very defective.

While in the large cities of America the immorality of the inhabitants is not so great as in the capitals of Europe, yet if the facts could be ascertained; perhaps we would have little to boast of. The standing army is, of course, at the bottom of much of the licentiousness in continental Europe. According to Töply, in the Austrian army 65 in every 1000 men are under treatment annually for venereal diseases, in the French army 43 in 1000, in the German army 37 in 1000. In Vienna out of every 1000 persons treated in civil hospitals and dispensaries, 132 are afflicted with venereal disease, at least 16 per cent. of this being syphilis. Computed on the whole population, we find that 65 persons in every 10,000, exclusive of the soldiery, are treated in the hospitals of Vienna for venereal trouble, and in Copenhagen, where physicians are obliged to report venereal disease as other contagious diseases are reported, Hjelt states that 25 of every 1000 inhabitants are affected. Illegitimacy is sometimes as common in distinctly agricultural districts as it is in military towns, as statistics gathered by Leffingwell show.

Although the question of illegitimacy is largely one of a social nature, yet medical men come in contact with it from the fact that children born out of wedlock are sup-

posed to have a higher death-rate than legitimately born children. The medical statistician, therefore, must recognize this condition as one of the possible causes of influencing health, but just why it should do so is another question. The desire for concealment on the part of the mother, the early abandonment of the infant, the poverty of the mother obliging her to work and leave her infant in the hands of strangers, or the farming out of the child, thus ridding herself of all responsibility—these and many other reasons are given for the increased rate of mortality. In France, where the unmarried mother is in a measure carefully looked after by the State, Blakie reports that illegitimate children thrive better than legitimate ones. Whether the State should take more pains to record illegal births or not is a matter for argument, many holding that the State has no right to subject the individual to such an inquiry. We have not been able to ascertain just why Vienna should lead the world in the greatest number of illegitimate births.

Advertising for Patients is considered highly unethical for individuals. Why is it not also the same for hospitals? Are right and wrong matters of the number of people committing the deed? If it is wrong for one physician to seek to get ahead of others by advertising, is it less wrong, nay, is it not much more wrong, for a club of physicians (for nowadays that is about all a "hospital" means) to seek by the same means to get ahead of all the rest of their fellows? Here is a copy of a widely scattered circular begging and singing for alms and patients—*arma virumque cano*, it might be punningly entitled:

The Board of Trustees of the _____ of the city of _____ strongly recommends the following advantages offered to the public:

Mill and factory owners, lodges, and beneficial associations can secure a bed at the _____ for 365 days by paying \$200, and upon averaging the days may have several patients in the hospital at the same time.

Subscription books can be obtained by working people of both sexes up to the age of fifty, subject to the regulations of the hospital, whereby, on paying an initiation fee of one dollar and monthly instalments of fifty cents, each subscriber may be treated in case of sickness entirely free of further charge. Heads of families and owners of factories should particularly recommend to their servants and employes to avail themselves of this excellent facility.

It will be noted that not a word is said as to discrimination. Like "saving grace," the institution is "free to all." Indeed, another part of the circular speaks warmly of the advantages "to the wealthier classes by the advantages of our home-like private rooms, whose number and comforts," etc., etc.

How very like a composite-store newspaper "ad." "A full line of all styles and qualities to suit every taste and pocketbook."

We also read: "While our annual expenses are increasing, our income remains far behind our requirements"—and this is just the condition of many of us—especially those of us who are not trustees, or who do not hold hospital positions. Ugh!

REVIEWS.

A TEXT BOOK ON NERVOUS DISEASES. By American Authors. Edited by FRANCIS X. DERCUM, A.M., M.D., Ph.D., Clinical Professor of Diseases of the Nervous System in the Jefferson Medical College of Philadelphia. With 341 engravings and 7 colored plates. 8vo, pp. 1056. Cloth, \$6; leather, \$7. Philadelphia: Lea Brothers & Co., 1895.

THERE are not wanting good books on nervous diseases, but in none has the subject received presentation similar to that given it in the volume under review. The text has been prepared by 22 collaborators, and is cast into 34 chapters. General Considerations are dealt with most admirably by Weir Mitchell and F. X. Dercum; and C. A. Oliver treats of the Examination of the Eye from the standpoint of the neurologist. General Morbid States of the Nervous System occupy 3 chapters, which include excellent articles on Neurasthenia by F. X. Dercum; Hysteria by J. H. Lloyd; Nervous Affections following Railway and Allied Injuries by P. C. Knapp. In successive chapters E. D. Fisher deals with Diathetic and Toxic Affections of the Nervous System; W. Osler with Diseases the Direct or Indirect Result of Infection; W. Sinkler with Choreiform Affections; C. W. Burr with Local Spasm and Occupation-spasm; L. C. Gray with Functional Tremors, Paralysis Agitans, and Epilepsy. General Diseases of the Brain are discussed in 2 chapters in an article on Arrested Development and Malformations by N. E. Brill, and in another on Diseases of the Membranes, Sinuses, and Brain-tissue by F. X. Dercum. C. K. Mills treats with clearness and fulness of the Anatomy of the Central Cortex and the Localization of its Functions. Focal Diseases of the Brain occupy 3 well-executed chapters: Hemorrhage, Embolism, and Thrombosis by C. L. Dana; Tumors by M. A. Starr; Cerebral Palsies of Childhood by F. X. Dercum. Diseases of the Spinal Cord are considered in 3 chapters: General Affections by J. H. Lloyd and by M. Prince; Systemic Affections by F. Peterson. Peterson also treats of Palsy and Multiple Cerebro-spinal Sclerosis. F. X. Dercum presents Paretic Dementia and Syphilis of the Nervous System; W. Sinkler Diseases of the Nerves. Diseases of the Cranial Nerves are considered in 2 chapters, one by G. E. de Schweinitz, the other by C. A. Herter. Herter also discusses Diseases of the Spinal Nerves and their Plexuses. G. W. Jacoby has written the chapter on the Diseases of the Muscles; J. Collins that on the Trophoneuroses; C. W. Burr that on Trophic Diseases Associated with Pathological Changes in the Thyroid Gland; J. C. Wilson that on Symptomatic Diseases; W. W. Keen that on the Surgery of the Brain, Spinal Cord, and Nerves; and G. W. Jacoby that on Neuro-electrotherapeutics.

It may thus be seen that the list of contributors is made up largely of those entitled to speak with authority by virtue of special study or investigation in diseases of the nervous system, and the work is to be viewed as a representative American production. Not only has the editor contributed a considerable number of articles—and they are among the best in the book—but the influence of his hand is appreciable on nearly every page. The book labors somewhat under the disadvantages

common to most composite works. The brilliancy of some of the articles exaggerates by contrast the weakness of others; while repetition of statement necessitates sacrifice of space, and diversity of opinion is calculated to confuse rather than to enlighten the ordinary reader. The illustrations are numerous and for the most part well executed; many are original.

HANDBOOK OF THE DIAGNOSIS AND TREATMENT OF SKIN-DISEASES. By ARTHUR VAN HARLINGEN, Ph. B. (Yale), M.D., Emeritus Professor of Dermatology in the Philadelphia Polyclinic, Dermatologist to the Howard Hospital. Third edition, enlarged and revised, with sixty illustrations, several of which are in color. Philadelphia: P. Blakiston, Son & Co., 1895.

DR. VAN HARLINGEN'S *Textbook of Skin-Diseases* has been before the profession for several years, and that it has in a comparatively short time reached a third edition is good evidence of its popularity as a student's guide, and a work of ready reference for the physician.

As stated in the preface, the book has been considerably enlarged by the addition of new matter, both in the text and in many foot-notes, and an examination shows that a number of the original articles have been given a thorough revision. Several of the rarer skin-diseases are considered for the first time, and, although the accounts are very brief, sources of more extended information are pointed out to the interested reader. A variety of new illustrations has also been introduced.

In the present edition the author has retained the alphabetic arrangement of subjects, "with the object of ready reference in view," and no doubt also because there was no system of classification that fully met the requirements.

After some experience and a good deal of reflection on this method, the dictionary-method, of writing books, we are forced to believe that the plan is a bad one, and that an imperfect classification is better than none at all.

It seems that a classification, Hebra's for example, gives the student a more coherent idea of the nature of skin-diseases, whereas the alphabetic plan presents a large mass of unconnected facts that are difficult to remember and properly associate. Moreover, on the purely literary side, this kind of an arrangement lacks dignity and gives an impression of scrappiness that does not really exist. We sincerely believe that Dr. Van Harlingen would do himself only real justice if in another edition he would rearrange his book in accordance with some well-matured system of classification.

We have no fault to find with the manner in which Dr. Van Harlingen has dealt with the various subjects contained in the book. As would naturally be expected from the author, his views are sound, his information extensive, and in matters of practical detail the hand of the experienced physician is everywhere visible.

In reading this book it should be always borne in mind, as explicitly stated by the author, that it makes no pretensions to be considered a comprehensive treatise on dermatology, but rather that it is a handy volume for the physician and student; and consequently the pathology of cutaneous affections is but briefly considered, if at all, and unsettled questions in nosology

and etiology, and other matters of interest to the specialist, receive but little notice. The illustrations in black and white are for the most part good, but the chromolithographs are not especially helpful. Although we must repeat that the alphabetic arrangement of the subjects is to be regretted, the work is a mine of carefully collected practical information, and will prove a valuable desk-companion to all who come in contact with skin-diseases.

1. **BLOOD SERUM THERAPY AND ANTITOXINS.** By GEORGE E. KRIEGER, M.D. With illustrations. Chicago: E. H. Colegrove & Co., 1895.

2. **IMMUNITY, PROTECTIVE INOCULATIONS IN INFECTIOUS DISEASES, AND SERUM-THERAPY.** By GEORGE M. STERNBERG, M.D., LL.D., Surgeon-General, U.S. Army. New York: William Wood & Co., 1895.

FEW things illustrate more forcibly the stupendous zeal and activity of the present age than an inspection of the bibliography of antitoxins and immunity. In the short space of six years a literature of vast proportions has accumulated, to master which few have the necessary opportunity or leisure. The majority of physicians are compelled to obtain their information at second hand, and it is for their benefit chiefly that the books before the reviewer are written.

The little book of DR. KRIEGER covers very well the salient points on the subject of blood-serum therapy, dealing, as it does, with the theoretic questions, as well as with the practical applications of the new therapy in the two best-studied diseases, diphtheria and tetanus. Although the diction is somewhat quaint and "foreign," the matter is clearly presented, and the book warrants a careful perusal.

The work of SURGEON-GENERAL STERNBERG is divided into two parts. The first treats of immunity, the second of protective inoculation and serum-therapy. In the first part natural and acquired immunity are separately considered. The former, the author believes, is due to "a germicidal substance present in the blood-serum which has its origin (chiefly at least) in the leukocytes and is soluble only in an alkaline medium. Local infection is usually resisted by an afflux of leukocytes to the point of invasion, but phagocytosis is a factor of secondary importance in resisting parasitic invasion." Regarding the action of antitoxins in acquired immunity, the author does not give his adherence to either of the opposing schools, that represented by Buchner, which teaches that antitoxins are modified toxins and act by rendering the body-cells immune to the toxin, or that of which Behring and Roux are the chief exponents, and according to which the antitoxins are produced by the body-cells and act, as Behring at least maintains, by neutralizing the toxins directly. The source and method of production of the antitoxins in the animal body and their mode of action are still undetermined.

In the second part the author deals with the infectious diseases in which experimental immunity has been produced in man and animals, or in which attempts at its production have been made. Of human diseases, cholera, diphtheria, hydrophobia, influenza, pneumonia, small-pox, streptococcus-infection, tetanus, tuberculosis, typhoid fever, and yellow fever are discussed.

The volume will prove very useful to everyone interested in the absorbing subjects of immunity and serum-therapy, and it is rendered doubly valuable by the extended bibliography appended to each chapter.

MEDICAL GYNECOLOGY. A TREATISE ON THE DISEASES OF WOMEN FROM THE STANDPOINT OF THE PHYSICIAN. By ALEXANDER J. C. SKENE, M.D., Professor of Gynecology in the Long Island College Hospital, Brooklyn, New York, etc., etc., etc. With illustrations. Pp. 529. New York: D. Appleton & Co., 1895.

IN these days, when the cry is almost entirely for surgical interference in the pathologic conditions of woman-kind, a book of the nature of the present volume carries with it an agreeable freshness that is more than attractive. It must be evident to all that but a very limited number of physicians are so qualified by training and convenient environment as to become practical abdominal and pelvic surgeons, while it is incumbent upon all who are actively engaged in the practice of medicine to be fully acquainted with the methods of diagnosis and the medical treatment of the minor gynecologic complaints, and to be so well prepared to recognize the initial stages of the graver conditions as to summon the skilled abdominal surgeon before the time for operative procedure has passed. To all such is Dr. Skene's admirable work most cordially recommended. The book is especially rich in the description of methods of treatment of neurasthenia and other nervous affections to which so large a proportion of women are heirs. Unfortunately, however, as we think, by far too much prominence is assigned the subject of electricity in gynecologic practice, in which, as is now largely admitted even by its former most earnest advocates, it has but a limited scope. Especially would we recommend, on the other hand, a careful study of the section on the application of massage to gynecologic conditions, a subject that is comparatively but little known, and the immense value of which is beginning to be recognized. Diet in gynecology and a suitable regimen for aged women are also ably disposed of. The illustrations, while few in number, as would be expected from the nature of the subject-matter, are good, and the general arrangement of the book is excellent.

CORRESPONDENCE.

THE VIVISECTION-CONTROVERSY.

To the Editor of THE MEDICAL NEWS,

SIR: As a subscriber to THE MEDICAL NEWS, I have always found its columns both entertaining and profitable; but I must confess to a little disappointment in your long editorial of Nov. 30th, and its references to myself. I venture, therefore, to ask the courtesy of your columns, less for reply to your criticisms than for explanation of apparent inconsistencies.

It does not seem to me, in the first place, that your summary of my paper concerning the manifesto of the Harvard professors is as fairly set forth as the facts would warrant. Permit me to state them.

On the 13th of last July there appeared in the Boston *Transcript* a long article "Concerning Vivisection,"

signed by the Assistant Professor of Physiology in Harvard Medical School, and drawn up at the suggestion of five other leading professors. It distinctly claimed to be "a plain statement of the whole truth" regarding experimentation on living animals; and, referring to the occasional necessity of painful investigations, it went out of the way to make the strange assertion that "none such have been made in the Harvard Medical School within our knowledge."

Now this statement was either true—or untrue. I doubted its accuracy, and in the columns of the *Transcript* of July 22, I called attention to this most peculiar assertion. Surely a mistake had been made? But no explanation came. The oracles had spoken; the public must implicitly believe. Confronted with a statement like this, made by men of the highest scientific reputation, what is one's duty simply as a lover of truth? To accept it? To be silent? I must not decide for others; but, to me, it seemed that refutation was demanded in the interests of Science herself. You say, sir, that I have "given the lie" to men whose "names and work are well known in all the scientific world." You are mistaken; I am not given to overstepping thus the amenities of discussion. But I brought out "in bold relief some of the more or less shocking features of the experiments" in Harvard Medical School, without at the same time touching either the object of the investigation or the results obtained. I admit it. Pray, what had these to do with the one question of the *painlessness* of the vivisections? How can there be any "shocking features" to *painless* research? The truth is, somebody blundered, and was too proud to confess it, even when confronted with the proof. That may be taken as fidelity to science; everyone must judge for himself. At all events it is not my ideal of what truth demands.

Your comments upon the preliminary report of the American Humane Association would be more satisfactory if they could have been based upon the complete report, now in the printer's hands. I do not think that any scientific man, physician or otherwise, need be ashamed to find his name—where I place my own—beneath that of Herbert Spencer, in favor of vivisection regulated by law.

And, finally, permit me gently to protest against being classified by you or anybody else as an "antivivisectionist." Is there no middle ground within the scope of imagination? Cannot a man be temperate without being a teetotaler? It is fifteen years since I first wrote on this subject, and never a line that denied the utility or the rightfulness of vivisection, *per se*. But what I do abhor and execrate is the licence, cruelty, and abuse that I have seen for myself. Does THE MEDICAL NEWS deny that abuse exists? I wish denial were possible. Let me cite admission by a writer who has most accurately represented my views regarding this whole question. It is from a work that I have long admired for its bold and reverent treatment of one of the deepest problems with which the human intellect can engage; a work which I believe will be better known a century hence than it is to-day: "If," he says, with significant caution, "if a very limited use of vivisection-experiment is necessary for scientific and medical progress, it must be regulated by law, carried out with jealous guarding against excess and against suffering, and the maimed animals painlessly killed when the experiment is complete. The

practice carried on by conceited jackanapes to prove over again already ascertained results, *to minister to egotism, for didactic purposes, these are not necessary, and must be forbidden.*"

There, sir, is a fair expression of my sentiments regarding vivisection. I have never denounced abuse with greater vigor, nor asked for more stringent regulation than is here demanded.

I am, sir, etc.,

ALBERT LEFFINGWELL, M.D.

CAMBRIDGE, December 3, 1895.

We regret that we classed Dr. Leffingwell among the prohibitive antivivisectionists, as this was an error. But we do not think he allows sufficient credit for the scientific beneficence that has come through vivisection. He seems to be somewhat blinded to this aspect—to the uses—by the fervor of his indignation against the abuses.

In addition to the foregoing letter, we have received others—one protesting that for teaching physiology vivisection is highly necessary; another that the methods of obtaining information by the Humane Association were not thorough, etc. It seems to be a difficult matter for men to consider this question dispassionately, and the extremes of opinion of most worthy people tend to make one despair of the reasonableness of *homo*, and of his ability to ascertain truth. It is especially difficult to preserve one's aplomb under such criminal logic and falsehood screams as *Life* and "*Ouida*" treat us to. The judicial quality of mind is in danger of being lost, and one feels tempted to roar one's self hoarse with the anti-antivivisectionists. But neither would this do any good. If we are men we must seek the truth, and all of that partial truth to be found in partisans. Undoubtedly abuses, deplorable abuses, have been perpetrated by vivisectionists—and just as undoubtedly the antivivisectionists have been guilty of excess, *e. g.*, in trying to do away with the use instead of the abuse. We do not think that vivisection for didactic purposes or for acquiring operative skill would, uncontrolled by legislation, yield probable good results to outweigh the probable evil results. Assuredly the modern sentiment of kindness to animals is one of the best things gained by civilization. Just as certainly have there been splendid gains in the relief of human suffering and disease that were impossible to reach except through vivisection. The task of wise and good men is to preserve and carry on both gains. One need not scream with the anti's nor roar with the anti-anti's. Reasonable men know the excellence of moderation.

There is much woful confusion of ideas as to what is really meant by vivisection. It is very evident that the disputants often set up their own imaginative concepts, and viewing them as realities fight for or against them, *vi et armis*. The larger number of vivisection-experiments consist simply in the painless death of animals. They are not *vivi-sections* at all, but *mortui-sections*.

Professor Wilder has also devised two excellent words which should come into general use, because they make clear a necessary distinction. They are *callisection*, or *painless vivisection*, and *sentisection*, *i. e.*, *painful vivisection*, or *that without the use of anesthetics*. No meat-eater, except the most egregious ranter, can object to postmortem dissection. No sensible person can object to *callisection* for proper purposes. The only question

remaining pertains to *sentisection*, and if silly controversialists would stifle their stupid frenzies and look at facts, they would soon find that decent people differ but little about the matter, and that there has been a very childish quarrel, of which both sides should be ashamed.

Now antivivisectionists are not vegetarians, but generally meat-eaters. They do not, therefore, object to the death of animals, and if we may judge, we fear they are far more critical of the manner of death in laboratories than in slaughter-houses. They even wear—as we suppose—woolen clothing, although there is seldom greater suffering possible than often exists in the exposure of freshly-sheared sheep. There is more suffering in the transfer of a single shipment of cattle from their Western plains to England than has ever taken place in all the laboratories of all the world. All of which by no means justifies the—comparatively few—horrible abuses of scientific vivisection of which men have been guilty, who have clothed the wolf of their vanity and ambition with the sheepskin of pseudo-science. Nor can we forget that within a year a physician, a leader in science, if not in medicine, has in reference to vivisection publicly uttered these infamous words: "I certainly think that children and everyone ought to be familiarized with the sight of blood, the pangs of disease, and the solemn event of dying." It is such atrocities as this, few and non-representative as they are, that offset the silly and stupid ravings of shortsighted sentimentalism on the part of lay-enthusiasts. Let us have done with both sorts of egregious extremists.—[EDITOR, MEDICAL NEWS.]

TOXIC EFFECTS FROM ACETANILID APPLIED TOPICALLY.

To the Editor of THE MEDICAL NEWS,

SIR: I have read with interest, in THE NEWS of November 16, 1895, the Progress-note upon "Toxic Effects from Acetanilid Applied Topically." A short time ago I was called to see a child, five months of age, that was extremely cyanosed, with a pulse of seventy-five beats to the minute. Nothing else abnormal could be discovered. The child did not seem to be in distress in any way, but quiet and comfortable. No medicine had been given internally. The heart was normal excepting for its slowness, and at birth no irregularity was noticed. Upon close inquiry it was found that the mother had obtained from a neighbor a white powder, which proved to be acetanilid, and had applied this freely to the groins of the child, which were badly irritated. The following day the cyanosis appeared. Upon the withdrawal of the drug the pulse and color became normal.

Respectfully,

J. A. BROBERG.

DEHAVAN, MINN.

THE INDEX MEDICUS.

To the Editor of THE MEDICAL NEWS,

SIR: We ask permission to state that the plan proposed for continuing the publication of the *Index Medicus* having been successful, no more subscriptions can be received.

JOHN S. BILLINGS, M.D.,
ROBERT FLETCHER, M.D.,

Editors.

WASHINGTON, D. C., Nov. 27, 1895.

SOCIETY PROCEEDINGS.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Eighth Annual Meeting, held in Washington, D. C., November 12, 13, and 14, 1895.

(Concluded from page 643).

DR. A. VANDER VEER, of Albany, N. Y., read a

REPORT OF SEVEN CASES OF ABDOMINAL SURGERY IN WHICH THE MURPHY BUTTON WAS APPLIED.

The first case was one in which an anastomosis between the upper end of the jejunum and the greater curvature of the stomach was made for carcinoma of the pyloric extremity of the stomach by means of a medium-sized Murphy button. The patient was comfortable after the operation, but died from exhaustion on the third day.

The second case was one of carcinoma of the sigmoid flexure, removal and end-to-end anastomosis. The operation consisted in removal of a mass three inches in length in connection with the sigmoid flexure, and an anastomosis of the large intestine by means of the button. The cause of constriction was found to be carcinoma. The patient died from exhaustion on the eleventh day, but was much exhausted and emaciated previous to operation.

The third case was one of removal of stones from the gall-bladder, using a long drainage-tube button. In this case recovery ensued.

The fourth case was one of removal of eight inches of the small intestine, together with a papillomatous ovarian cyst. End-to-end anastomosis was effected with the button and recovery followed.

In the fifth case an anastomosis was established between the gall bladder and the small intestine, with recovery.

In the sixth case operation revealed a tumor the size of a coconut in the immediate vicinity of umbilicus, a portion the size of a silver dollar implicating the umbilicus and being in a gangrenous condition. On making an incision there was found a strangulated hernia and many old and firm adhesions. The peritoneum was intensely congested and very dark in color. A loop of small intestines was included in the tumor and gangrenous for a length of ten inches. The vessels in the mesentery were secured and this portion of the intestine was excised. A Murphy button was used for end-to-end anastomosis. The button was passed thirteen days after the operation, and was followed by a large movement of the bowels. Uninterrupted recovery ensued.

In the seventh case a diagnosis of biliary calculi was made. The usual incision was made for exploration of the gall-bladder, which was found to contain about two ounces of bile. Through the walls of the viscus and down into the cystic duct could be felt a number of small calculi. There were some adhesions. The long drainage-tube button was introduced into the fundus of the bladder and the wound closed, after a careful examination for any possible carcinomatous mass, which, however, was not found to be present; the patient was then placed

in bed. The use of the button in this case was regarded as a saving of time, leaving the patient in good condition for removal of the gall-stones later. Several days afterward the attending physician removed five irregularly shaped calculi, which Dr. Vander Veer exhibited. At this time the patient began to show marked symptoms of cerebral anemia, with delirium, finally passing into a comatose state and death resulting.

Dr. Vander Veer said that the cases reported, although not many, yet covered a field in which the Murphy button might be made use of readily and easily and with satisfactory results. The Murphy button will not answer for every lesion involving the intestinal tract; but it surely has its sphere of usefulness, as it is clean, easily handled, and saves the patient from a much longer operation, when time alone is the great desideratum.

DR. H. H. GRANT, of Louisville, followed with a paper entitled

INTESTINAL RESECTION AND ANASTOMOSIS.

He said that there had always been a division of judgment upon the question of immediate suture in acute obstruction or injury requiring resection of the intestine which even the improvements in technic and means of aid in operative work have not adjusted. What it is intended to do with the Murphy button it does well; but too often it does what is not intended, and disaster and death result. There is abundant evidence that it becomes a foreign body; that it occasions spreading necrosis, which involves the peritoneal coat; that recontraction takes place after lateral anastomosis; that fatal results are frequently directly attributable to its use, beside other less important objections.

Lateral anastomosis is now beyond all question the most acceptable method of resection in the continuity of the bowel, if we exclude the button. It is best accomplished by direct suture, and direct suture is difficult of execution except in very skilled hands. In order to facilitate direct suture, Dr. Grant presented a device for clamping opposing surfaces of the bowel, cutting off fenestra between them, and retaining them so opposed until the suture can be completed. He then demonstrated the *modus operandi* of this device.

He had experimentally used the clamp sixteen times with fourteen consecutive recoveries, but had had but one opportunity to use it in practice. On May 25th he operated on Mrs. E., aged 53 years, who had a fecal fistula at the right femoral opening, the result of a strangulated hernia, operated on eight months before. An incision was made just above Poupart's ligament, near the fistulous opening. The fingers easily liberated the intestine, which presented an opening occupying half its lateral surface and as large as a quarter of a dollar. The mesentery was greatly thickened; the distal segment of the bowel was reduced in size, the proximal dilated at the site of the fistula. The intestine was resected for a distance of about four inches; the blades of the clamp were applied opposite the mesenteric borders of each segment, and the anastomosis made in the manner described. After suturing, the communication between the opposing surfaces was found ample. The cut ends were then invaginated and the anastomosis returned; the abdominal wall closed with silk-worm-gut sutures; the site of the fistula curetted and filled with iodoform-gauze; and the patient put back to bed in forty-

two minutes. There was very little shock. At the present time the patient is well.

The advantages of this method over the other aids, except the button, are manifest. Not only does it do away with the foreign body, but it makes an opening three or four inches long at the fenestra. It is as easily accomplished and takes less time. It is no more difficult to use than is the button, but the operation cannot be so quickly completed, as the invagination of the ends is not necessary after the end-to-end approximation with the button. The clamp merely makes direct suture easy to an ordinarily skilled hand.

DR. C. A. L. REED said experience would establish the fact that the Murphy button ought not to be used in approximation of the large intestine, for the reason that the intestinal contents were not sufficiently liquid to pass through the small opening in the button. In the small intestine the liquid contents will pass through the opening in the button and the approximation is satisfactorily accomplished. Dr. Reed reported a case of resection of the sigmoid flexure for malignant disease (which terminated fatally) in substantiation of his remarks, the anastomosis being made by means of the Murphy button. He commended the device presented by Dr. Grant, and, although he preferred the end-to-end procedure, he would try the device in the next case in which he performed lateral anastomosis. Cholecystenterostomy by means of the Murphy button was one of the easiest, neatest, and altogether most satisfactory operations known to surgery.

DR. JOSEPH M. MATHEWS, of Louisville, said that he had taken occasion more than once to call attention to the difficulty that attends the diagnosis of tumor of any kind in the sigmoid flexure. Time and again he had been mistaken, as he believed others had, in supposing that he had malignant tumor of the sigmoid when he had not, and supposing, on the other hand, that he did not have this when he really did. A few years ago a patient was brought to him from an adjoining State, and from evidence outside of palpation he believed that the man had malignant trouble of the sigmoid flexure. A few days thereafter he was taken to Chicago, was examined by a very eminent surgeon, who stated positively that there was no tumor of any kind in the flexure, and advised the patient to go home and go to work. In less than a week the man was dead. An autopsy revealed carcinoma of the sigmoid flexure. His reasons for opposing resection of the sigmoid and making anastomosis by the Murphy button were in substance the same as Dr. Reed's. Carcinoma in the sigmoid flexure was not only usually attended with systemic infection, but there is an involvement of other organs and tissues of the body. He would therefore ask, could a man live any longer after a surgeon had removed the tumor than he would if it was left untouched? Granting that there is total obstruction, would it not be better to perform colotomy and let the man live out his allotted days with carcinoma in a more pleasant way than he would if an operation were done? In lieu of this, it had occurred to him that the plan suggested by Dr. Bacon, of Chicago, of anastomosing the colon with the rectum, leaving the growth there, would be a more favorable operation than extirpation of the carcinoma.

DR. A. M. CARTLEDGE, of Louisville, said that in doing a cholecystotomy there was not much time saved by using the Murphy button, and it was not as useful as

ordinary methods of suturing. He thought that this was well illustrated in one of the cases reported by Dr. Vander Veer, in which there was a passage of stones after the operation, and in which the button was necessary on account of the extremely feeble condition of the patient. In cases with numerous small calculi extending into the cystic and common ducts, he had made a comparatively large incision in the gall-bladder and sutured the margins to the peritoneum, when the stones could not be removed, and they would then pass for days externally through the drainage-tube. The orifice in the button is too small to permit the stones to pass, whereas they would escape through a drain and come out. He expressed himself in favor of Dr. Grant's device, and considered it an excellent one for lateral anastomosis.

DR. W. E. B. DAVIS believes that the Murphy button can be used to advantage in intestinal work when it is necessary to perform operations quickly; otherwise the method of stitching similar to that practised by Abbe is better, more certain, and accidents are not so likely to follow as from the use of a mechanic appliance which is non-absorbable. Cholecystenterostomy by the button should be resorted to only in those cases in which it is impossible to remove the obstruction in the common duct. The old method, as pointed out by Dr. Cartledge, is decidedly better in the other class of operations.

DR. VANDER VEER, in closing, was satisfied that end-to-end anastomosis with the button in the large intestine was not likely to be a satisfactory procedure on account of the reasons mentioned by Dr. Reed. He believed Dr. Grant had presented an appliance that would be of value to the profession. The fact that new devices for intestinal anastomosis were being presented from time to time before medical gatherings was ample evidence that we had not yet reached an ideal method. The Murphy button is an excellent device for the performance of cholecystenterostomy and other operations.

DR. GRANT believes that any surgeon of ordinary skill, after having the two surfaces of the bowel directly opposed, can with his device suture them without soiling the peritoneum or letting them slip away.

DR. J. MCFADDEN GASTON, of Atlanta, Ga., read a paper on

SURGICAL INTERFERENCE IN RECTAL DISORDERS.

He said that the practicability of eradicating rectal troubles of syphilitic origin by medication is a mooted point, and with the present light on the subject it seems justifiable to resort to such a surgical measure as the condition indicates, while constitutional treatment is being carried out in the case. There are instances of supposed development of specific disease in the form of stricture of the rectum, after the lapse of many years subsequent to any syphilitic contamination, and some authors claim their ability to diagnose specific stricture even without a previous history of primary syphilis. Strictures of the rectum from fibrous deposition in its walls call for division or excision of the structures involved. When carcinomatous induration of the rectal tissues is detected early there is encouragement to undertake an operation, but after the breaking down of the neoplasm, with infiltration of the surrounding structures, no benefit is derived from excision of the parts involved. The rectum affords material for surgical work of the

most important character, and it should not be relegated to those professing to deal with so-called "orificial" surgery.

The burning and urgent need of the surgeon is a definite settlement of the issue as to active interference in cases of pronounced carcinoma of the rectum. Shall we content ourselves with the palliative measure of inguinal colotomy and leave the diseased structures untouched, as urged by Dr. Mathews, or shall we endeavor to remove all the tissues involved by extirpation, as recommended by Dr. Gerster? The full statistics of results in the hands of skilled operators ought to be collected and a fair analysis made before a final adjudication of the question is reached. The materials for such a comparison should be obtained from special hospitals for the treatment of carcinoma in this and other countries, as well as from general hospitals receiving and treating this class of patients; being grouped together, a fair inference may be drawn as to the feasibility of active interference in any case of carcinoma of the rectum.

DR. J. M. MATHEWS said that he was glad the essayist had alluded to fissure of the rectum giving rise to reflexes, as to have such reflexes there must be a pathologic condition. The so-called "orificial" surgeons had run wild with reflexes from the normal rectum, and as a consequence many respectable citizens had lost healthy rectums. Dr. Mathews' observations had been that benign rectal stricture is very seldom met with. When found, it is simply an annular constriction of the mucous membrane, which is easily dissipated and does not require excision. When the surgeon introduces his finger into the rectum and finds a stricture it betokens one of three serious diseases—syphilis, tuberculosis, or carcinoma—and the patient should not be turned aside with a jesting remark that he has a rectal stricture. Dr. Mathews maintains that 60 per cent. of the cases of stricture of the rectum arise from syphilis or are the result of it. He had asked his professional friends to investigate this matter and make known their investigations. The responses he had received were nearly all in the affirmative. He regards syphilitic stricture of the rectum as more frequent than either carcinoma or tuberculosis. As in nearly every instance of carcinoma blocking the rectum to the sigmoid flexure we have systemic infection, can a cure be expected from surgical interference? It is to be wished that the rectum could be successfully removed for carcinoma.

DR. H. M. NASH, of Norfolk, Va., had seen a number of cases of ulcer of the rectum cured by dilatation of the sphincters and topical applications. He uses the Sims speculum, placing the patient in the exaggerated Sims position, which gives the operator all the room he wants for manipulation in the rectum.

Afternoon Session.

DR. GEORGE H. NOBLE, of Atlanta, Ga., read a paper entitled

ONE-HUNDRED-AND-SIXTY-SIX CASES OF CARCINOMA OF THE PREGNANT UTERUS OCCURRING SINCE 1886.

The author's attention was directed to this subject by four cases that came under his observation, and his success in dealing with them had encouraged him to look more carefully into the treatment. As a result he had

collected one-hundred-and-sixty-six cases of carcinoma of the pregnant uterus which had occurred since 1886, the time of the Barr Thesis. Dr. Noble confined himself mainly to the statistics of the treatment and results, referring to Barr, Cohnstein, and others for information concerning the age, the period of recurrence, the period of abortions, etc. There were twelve partial amputations of the cervix in the seven months of pregnancy, averaging five-and-a-half months; almost all of the mothers recovered from the operation; 66.6 per cent. went to full term, one child dying subsequently; and 41.6 per cent. aborted. Two mothers had subsequent operations performed for removal of carcinoma, but there was recurrence in both cases. Another conceived a second time and died thirteen days after confinement, of peritonitis. Of the three cases of intravaginal amputation of the cervix, two recovered from the operation, giving a mortality of 33.3 per cent.; the children the same. One mother died of peritonitis; one died suddenly six weeks after confinement; and the third had two subsequent operations for the removal of the malignant disease, making an ultimate mortality of 66.6 per cent., and possibly 100 per cent. The intravaginal amputations give a combined mortality from operations: of mothers 19.3 per cent., of infants 40 per cent. Sixteen supravaginal hysterectomies were done prior to the seventh month, with a mortality of 6.2 per cent.; six had recurrences of the disease, three had no return, and seven were not observed. Of the sixteen cases in which the records were complete, thirteen cases were lost, a mortality of 81.3 per cent. Of the remaining three, one went to full term, and in the other two the result was not mentioned. One case aborted thirty-five days after conception, aborted again in forty days, conceived a third time, was delivered normally, and was well five years afterward. There were 23 vaginal hysterectomies. In two cases the results were not recorded, leaving 21 cases, all successful. There were seven cases of vaginal hysterectomy in the puerperal period from fourteen to twenty days after abortion or delivery; all recovered.

The total number of abdominal hysterectomies was 16; in 12 of these Freund's operation was performed; in one Mackenrodt's method was followed; the remainder are not described. Of this number 7 died from the operation, making a death-rate of 43.7 per cent. One case had enchondroma of the pelvis, another had return of carcinoma in one year, and a third had a return in a few months, and died seven days after an operation for ileus due to carcinoma of the intestines. These three are the only ones with complete records; therefore it is impossible to give an estimate of the ultimate recoveries. The products of conception were all lost.

Cesarean section was done forty-three times, as follows: Conservative (or Säger), 26; Porro, 9; Freund's, 8 times. Of the 26 conservative operations 16 died and 7 recovered; in two the results are not recorded, and one was dead before the operation was performed.

The number of recoveries after the Cesarean-Porro operations was four, of deaths five, the mortality of 55.5 per cent. In eight Cesarean sections by the Freund method there were three recoveries and five deaths, giving a mortality of 61.1 per cent.

A short summary shows (1) that vaginal hysterectomy should be safe in the early months of pregnancy and the puerperal state, when there is a reasonable

hope for the mother. (2) That abdominal hysterectomy should be done when the uterus is too large to be rapidly and safely removed through the vagina. (3) That at or near the end of pregnancy Cesarean section should be resorted to, when the child's interest is to be considered. (4.) That Cesarean section with Freund's operation is permissible when the disease is confined to the uterus and the child is viable. (5) That in doubtful cases cutting of the cervix and rapid delivery may be judicious when the incision can be made in non-ulcerated or non-infiltrated tissue. (6) That as there are four chances to one against the life of the fetus, and as an equal number of mothers may be ultimately cured in the early stages of the disease, the safety of the fetus should not be allowed to hazard the life of the mother; and that, upon the other hand, the futile efforts directed to the interests of the mother, when her case is hopeless, should not jeopardize the safety of the fetus in the latter months of pregnancy.

DR. HOWARD A. KELLY, of Baltimore, said that carcinoma of the pregnant uterus is rare. He had seen but three cases. If the new-growth is seen in the early stage, when it presents itself as a mere nodule on the cervix, not apparently extending into the broad ligaments, and pregnancy is approaching, it would be safe to let pregnancy go on to full term, and labor to take place naturally. On the other hand, if the carcinoma has advanced to such an extent that there is a possibility of involvement of the broad ligaments, the surgeon could not operate too soon, because under the conditions of pregnancy the growth of carcinoma of the cervix is much more rapid than it is ordinarily.

DR. VANDER VEER, of Albany, stated that four years ago he operated on a case, doing a vaginal hysterectomy. Pregnancy had advanced about four months. He felt happy about the case for two-and-a-half years, at the end of which time carcinomatous nodules presented themselves at the site of the cicatrix. Pregnancy had advanced to full term. The patient lived for a period of eight months. The pelvis was filled with a carcinomatous deposit. Dr. Vander Veer reported another case of carcinoma of the pregnant uterus, and, while the patient recovered from the removal of the uterus, she subsequently died from recurrence of the disease.

DR. E. S. LEWIS, of New Orleans, contributed a paper entitled

HYSTERECTOMY FOR FIBROIDS.

He said that hysterectomy for fibroids, now a justifiable and recognized operation for the preservation of health, the prolongation and the saving of life through important operative procedures, minimizing the element of risk, had reached its present enviable position by the substitution of direct ligation of the uterine arteries for the unsatisfactory methods heretofore employed to secure immunity from hemorrhage, these measures often failing to prevent bleeding; and not infrequently there was exposure to infection through the region of the cervix. Complete hysterectomy, whether by the vaginal route in fibroids of moderate size, through the abdomen in certain cases, or by the combined abdomino-vaginal method in other instances, heralded a brighter era for the future of hysterectomy. That exceptions might occur with regard to individual cases, rendering the complete operation inadmissible, he was prepared to admit.

The author then reported eight cases in which the complete operation was practised:

CASE I was in a woman, aged fifty-three years. The tumor was of the size of a seven-months' pregnancy. Operation was performed March 11, 1894. An incision was made from the pubes to two inches above the umbilicus. The omentum was detached from the anterior surface of the tumor to which it was adherent; a portion of the omentum was ligated and cut off on account of free oozing. The sub-peritoneal fibroid attached to the fundus was lifted out, and the upper portion of the ligaments ligated and divided. The bladder was then detached, and the vaginal roof opened in front and behind. The lateral vaginal connections and lower portion of the broad ligaments were transfixed and ligated with a double ligature and the uterus freed. One suture was passed through the middle of the vaginal vault. The abdominal incision was closed, and the vagina loosely packed with iodoform-gauze pushed above the vaginal roof for drainage on account of some slight venous oozing. The tumor weighed 25 lbs. This patient made a satisfactory recovery.

CASE II was in a woman, forty-three years of age, who had profuse uterine hemorrhages. The uterus was as large as a five-months' pregnancy from the presence of an interstitial fibroid. The endometrium was curetted and iodine injected without relief. Hysterectomy by the vaginal method was performed, and recovery ensued.

CASE III was in a patient aged sixty-three years. A diagnosis of interstitial fibroid with carcinoma of the cervix was made. The uterus reached to the middle of the hypogastrium, and was about the size of the tumor in the preceding case. Its removal was easily effected in the same manner. The ligaments were secured with clamps. The fibroid, about the size of an orange, was not weighed. Recovery followed.

CASE IV was in a patient aged forty-four. The uterus was enlarged from the presence of a number of small fibroids. Vaginal hysterectomy was performed, and followed by recovery.

CASE V was in a patient aged thirty-five years. A diagnosis of uterine fibroid, reaching to the umbilicus, was made. Recovery followed operation.

CASE VI was in a patient aged forty-two, who presented a large uterine fibroid of the size of an eight-months' pregnancy. Vaginal hysterectomy was performed.

CASE VII was in a patient aged forty. A diagnosis of subperitoneal fibroid attached to fundus was made. The same operation was performed as in the preceding one.

CASE VIII was in a colored woman, who presented a fibroid affecting the body of the uterus, and as large as a six-months' pregnancy.

DR. HOWARD A. KELLY, of Baltimore, made some remarks on the

TECHNIC OF SUPRAVAGINAL HYSTERECTOMY.

He described a new method of hysterectomy, by which the uterus, ovaries, and tubes are removed through the abdomen. It is a modification of the Baer method. He had tested it in about one-hundred-and-fifty cases of all kinds, and had operated in the presence of hundreds of practitioners. While he had not heretofore described it, he had briefly referred to it before the Section on Ob-

stetrics and Diseases of Women at the last meeting of the American Medical Association.

DR. JOSEPH TABER JOHNSON, of Washington, D. C., followed with a paper entitled

SEVENTEEN CASES OF HYSTERECTOMY.

He said that the first successful hysterectomy ever performed was done by Dr. Burnham, of Lowell, Mass., in 1853. Kimball, who assisted Burnham in his first case, subsequently operated with success after a correct diagnosis had been made. In 1875 Kimball reported nine hysterectomies with three deaths. Burnham had then done sixteen hysterectomies with four deaths. These results were considered fairly good at that time. In 1878 Gusserow reported that up to 1866 Kœberle had lost all but eight out of forty-two hysterectomies, giving him a mortality of 81 per cent. Schroeder collected reports of 108 hysterectomies with a mortality of 85.3 per cent. Thomas, in his *Diseases of Women*, reports 24 cases with 18 deaths. Storer, in 1874, reports 10 American hysterectomies, all fatal. From 1874 to 1894 many changes were made in the technic, including asepsis, the Trendelenburg position, the intrapelvic but extraperitoneal treatment of the pedicle, the closure by suture of the separated edges of the broad ligament, drainage when necessary through the vagina after total extirpation, and these have all had their share in diminishing the mortality.

In the June number of the *Annals of Gynecology*, Cushing published a report of 1670 suprapubic hysterectomies done by American operators, with a mortality of 13.8 per cent. One of the improved methods of widening the scope of this beneficent and magnificent operation and greatly reducing its mortality was introduced, advocated, and practised by Dr. B. F. Baer, of Philadelphia, who is quoted in Cushing's article as having operated 78 times with 71 recoveries and 7 deaths.

Dr. Johnson presented his paper for the purpose of reporting 17 operations by Baer's method with 16 recoveries and one death.

DR. HENRY O. MARCY, of Boston, agreed with Dr. Johnson that the method of operating by the Kœberle clamp had been shown to be absolutely wanting in this type of operation; that it is not easier of execution except in very few and rare cases; that it is ill advised and subject to serious dangers.

In reference to the operation described by Dr. Kelly, he desired to refresh the memory of the members that in 1880 he published a paper in which he reviewed the various steps and pointed out the advantages of the operation which is now known as Baer's. In the International Medical Congress of 1881 he presented a second paper in which he emphasized the value of the operation. The advantage of leaving the stump was a great gain in the subsequent result, in that it left a sort of fixation-point between the uterus, rectum, and bladder. It is of value again in that it does not shorten the vagina—a question of paramount importance in reference to marital life and to the conditions that may follow in the subsequent history of the patient. He was sure that surgeons were working on the line of great and general improvement, and that when the technic of this operation has been developed more thoroughly the time will be when the removal of large fibroid tumors of the

uterus can be accomplished with equal safety as the removal of large ovarian cystomata.

DR. RICHARD DOUGLAS, of Nashville, said that one advantage of the procedure described by Dr. Kelly was that the bladder was out of the operative field, the surgeon not having to handle that viscus; that the operator could open the broad ligament and remove intraligamentary fibroids without difficulty and without danger. Another important feature was that the risk of ligating the ureter was greatly reduced.

DR. W. E. B. DAVIS, of Birmingham, believes that most surgeons are now inclined to accept the intra-abdominal method of operating, although it was still a question whether we shall have a pedicle or shall go in through the vagina. A very important point related to the time of these operations. He has seen Dr. Kelly operate and admired his manual dexterity; but to take out the uterus in six or seven minutes meant very little, when it takes an assistant, or an operator himself, an hour or more to complete the balance of the operation. At the last meeting of the American Medical Association he saw Dr. Kelly remove the uterus by the method he had described in something like seven minutes, but it took an assistant one hour and twenty minutes to finish the operation. It was no reflection on Dr. Kelly's skill as an operator, but he thought the matter of time should go on record in a little different way.

DR. A. VANDER VEER, of Albany, remarked that in 1889 he removed the uterus somewhat in the manner described, the case having been already recorded. He had done the operation only twice since. He uses the Kœberle clamp because he thinks he can do the operation much more quickly and has no reason to regret its use.

DR. A. M. CARTLEDGE, of Louisville, believes it is an advance in pelvic surgery to remove the uterus in badly septic cases, whereas formerly only the tubes and ovaries were taken out.

DR. E. S. LEWIS, of New Orleans, remarked that his experience with total hysterectomy for fibroids was restricted to the cases he had reported. The operations that he had performed up to last year were cases in which a partial removal of the uterus was effected, leaving a portion of the cervix. He could not but think, however, notwithstanding that the majority of the gentlemen who had spoken upon the subject appeared to be advocates of the partial operation of leaving a part of the cervix, that total removal of the uterus was the best operation.

DR. KELLY said, in reply to Dr. Davis, that when he spoke of removing the uterus in seven minutes or less, it did not include closure of the wound, dressing, etc. He had never been so dishonest as to make the statement that the entire operation could be done in such a short space of time, nor would he like that impression made.

DR. JOHNSON remarked, in reference to taking out the cervix, that it prolongs the operation and necessitates greater mutilation and more stitching, and seems to be unnecessary in view of the successful cases that had been and are being reported. Patients get perfectly well without doing it. He concurred in Dr. Davis' statement that the time consumed in taking out the uterus did not amount to much, but that we should consider the matter from the time the first incision is made

until the last stitch is inserted, the wound dressed, and the patient off the table.

DR. JOSEPH PRICE, of Philadelphia, contributed a paper entitled

ABDOMINAL HYSTERECTOMY.

Among other things he said that, had the same mortality attended the early oophorectomies that attended the first ventures in hysterectomy, there would have elapsed a longer period than forty or fifty years between the first successful oophorectomies and the date of the revival of the procedure. Both vaginal and supravaginal hysterectomy had been largely practised by those who had given pelvic surgery most attention. They are the men who have contributed the most to perfecting the procedure. Abdominal hysterectomy is the one procedure indicated in all cases of intrauterine malignancy, when the vaginal portion of the cervix is not involved; in all cases of uterine malignancy complicated with tubal and ovarian disease; and in cases of uterine fixation antedating the malignant development. Hysterectomy, vaginal or supravaginal, should be a simple, direct, and complete operation in every detail. When the operation is done with good surgical judgment and skill there will be comparative immunity from all risk of dangerous hemorrhage and avoidance of sepsis. The method of procedure that successful experience recommends as safe, the most satisfactory and complete in its results, consists in extirpation by lateral ligation, incision of the posterior vaginal fornix, circular incisions of the vagina to the bladder; and approximating the vaginal walls to and matching the peritoneum complete the simple procedure. Operations for malignancy by the upper method of dealing with omental and other adhesions lessen the risk of post-operative troubles and early recurrence. In all operations for malignancy Dr. Price advises the removal of both the ovaries and tubes, and says that an operation would be imperfect without this. The leaving of the ovaries sometimes results in the growth of small tumors, necessitating an additional operation. The toilet should be perfect. If the operation has been complicated by pus-accumulations in tubes and ovaries, with universal adhesions, irrigation followed by glass drainage will give the best results. Drainage should be used in all cases in which the adhesions are extensive, as oozing of blood and serum may be very free.

Morcellation, with a mortality of one in seven, cannot certainly be said to offer any very strong claim to consideration. Such a mortality does not compare favorably with the much-abused extraperitoneal operation with the Kœberle or elastic ligature. Dr. Price had no statistical reasons for complaining of any one of the four methods—intraperitoneal amputation, extirpation, supravaginal, extraperitoneal, or vaginal extirpation—as his results in all had been altogether satisfactory from the standpoint of recoveries.

DR. A. M. CARTLEDGE, of Louisville, Ky., read a paper on

HYSTERECTOMY IN ACUTE PUERPERAL SEPSIS, WITH A REPORT OF CASES.

He reported two very instructive cases, after which he summarized his conclusions with reference to acute puerperal sepsis, as follows:

1. From our present knowledge of the causation and nature of puerperal infection we may say that it is largely a preventable condition.

2. When occurring it is of the greatest importance to differentiate between puerperal intoxication or invasion of a piece of putrescent placenta or blood-clot by saprophytic germs and true septic infection or invasion of living cells by pathogenic bacteria. Puerperal sepsis, though in many cases producing the most alarming symptoms, is usually amenable to energetic treatment by curettage, antiseptic irrigation, and satisfactory tubular drainage of the uterine cavity.

3. True septic infection should be treated by sterilizing the birth-canal at the earliest possible time, free elimination by purgation, and a prompt evacuation of superficial abscess-accumulations about the cervix. Such a course may save the patient from more radical measures.

4. The chief differential points between puerperal intoxication and true puerperal infection are the comparative absence of pain, tympanites, and abdominal tenderness, and the more sudden onset and severe character of the symptoms in puerperal intoxication. Hysterectomy as a primary measure is never justifiable in septic intoxication, and when necessary it can only be after the mixed or secondary infection which may follow in the track of a primary sepsis.

5. Progressive involvement of the deeper structures, as evidenced by daily elevation of temperature, probably 103° F. in the evening and subnormal in the morning, together with night-sweats, scanty secretions, ascending pulse, are indications for hysterectomy.

6. It is often impossible from the involvement primarily of the low pelvic structures to make a bimanual examination that will reveal the true condition of the uterine appendages; but in view of the fact that these structures are not so prone to be invaded in the acute violent type of the disease vaginal hysterectomy should be the operation of selection.

SECOND DAY—NOVEMBER 13TH.

Morning Session.

DR. RICHARD DOUGLAS, of Nashville, read a paper entitled

SPLENECTOMY STATISTICALLY CONSIDERED, WITH THE REPORT OF A CASE.

Gathered from all sources, the author finds on record 194 splenectomies. Of these 126 were in females, 57 in males, and in 11 cases the sex is not given. Furthermore, he finds that in forty cases the operation was undertaken for wounds or injuries. Of this number 26 were in males and 14 in females. If we deduct these we find that the ratio of splenectomies for disease is 31 in males to 112 in females, showing the latter sex to be much more predisposed to disease of this organ.

Dr. Douglas then reported the following case: Mrs. J. S., aged 33, housewife, multipara, and a native of Tennessee, had a good family history. She has suffered occasionally with menorrhagia, but more recently from amenorrhea. She had malarial fever when 12 years of age. For the last three years she has lived in the western portion of the State on the banks of the Mississippi, and has suffered during this time from frequent

attacks of malarial intermittent fever. About August 1st last she suffered from an acute pain in the left side. A tumor was then discovered in that region about the size of a fist. Physical examination revealed a smooth, elastic, movable tumor, filling the left lateral region of the abdomen, with its borders well defined and its edges sharp and notched. It frequently changed its form; at times it appeared flat and smooth; again it would rise up as a sharp ridge, extending from the ribs to the symphysis pubis. There was absolute percussion-dullness over the tumor. Vaginal examination revealed the uterus displaced forward and the pelvis filled with a smooth, hard mass, which upon change of posture disappeared from the pelvis and occupied the left iliac fossa. The woman suffered with paroxysmal pain, although not severe, with a sense of weight, a dragging in the left side, flatulency, nausea, and occasional vomiting. There was some emaciation and slight anemia. There was no edema, ascites, vertigo, or insomnia.

A diagnosis of malignant hypertrophy of the spleen was made, and after due preparation the abdomen was opened by an incision about six inches long at the outer border of the left rectus. The spleen was found displaced and free from adhesions. Its pedicle was secured by interlocking ligatures; and was severed close to the organ. As additional security against hemorrhage, ligatures *en masse* were employed; also individual deligation of the splenic artery. After removal of the spleen, bleeding from the abdominal incision became very profuse, and required several ligatures. The peritoneum was closed by separate silk sutures, and the abdominal wall was brought together with the usual interrupted silkworm-gut sutures.

The post-operative history of this case was a very stormy one, but one month after operation the woman was out of bed, and is now well.

DR. W. E. B. DAVIS, of Birmingham, contributed a paper entitled

SURGERY OF THE BILIARY DUCTS.

He reviewed the operative procedures practised on the biliary passages, and recommended for cases of obstruction from stone in the common and hepatic ducts that the obstruction should be removed, and that no attempt should be made to suture the incision in the duct or ducts. His experiments had demonstrated that the field of operation will be walled off, and that no general inflammation will occur after this treatment. He had tested the value of gauze in draining bile in injuries of the gall-bladder and biliary ducts, and reported cases in which he had removed the gall-bladder without tying the duct by packing with iodoform-gauze. The animals got well. In other instances in which he incised the gall-bladder and biliary ducts, and packed with gauze around the openings, no stitches being used, the animals recovered. Complete walling off of the general cavity was noted when the abdomen of the animals was reopened. The experiments of Dr. Davis demonstrate conclusively that the peritoneum is capable of taking care of a small amount of bile, but that large quantities or the constant extravasation of it will produce a fatal peritonitis, usually in from twenty-four to forty-eight hours.

DR. JOHN D. S. DAVIS, of Birmingham, Ala., read a paper on the

MANAGEMENT OF CASES WHICH HAVE RECOVERED FROM APPENDICEAL ABSCESS IN WHICH THE APPENDIX WAS NOT REMOVED.

He said that the practice of dealing with appendiceal abscess by simply evacuating the pus and draining the cavity thoroughly without any extensive search or the breaking up of adhesions in order to find the appendix has been adopted by a large number of leading operators for some time. More recently some surgeons have advocated that the operation should be made complete in all cases; that all adhesions should be freed and the appendix removed. One leading abdominal surgeon, who has perhaps done more work in pelvic surgery than any other man in this country, has advocated this plan of treatment in vigorous terms. In a large proportion of cases of pus in the tubes and ovaries gonorrhea has been an important factor in its production. Such pus is not septic, and is not calculated to give rise to so dangerous a general inflammation as an infection from an appendicitis or an appendiceal abscess. It is a notable fact that a ruptured tube or ovary will usually be followed by a circumscribed inflammation. It is the exception that a fatal general peritonitis results from such an accident. The most fatal forms of peritonitis are due to rupture of an appendiceal abscess. In fact, but few cases are saved when such an abscess ruptures into the general cavity.

An operation on an appendiceal abscess is usually one of the simplest of procedures, and is attended with almost no danger. When the inflammation is circumscribed and the drainage is thorough, nearly all cases recover. The records of operations for appendiceal abscess show that the great majority of cases are cured after evacuation and complete drainage. Recurrence of the disease in such cases is rare. The appendix, having ruptured in a large proportion of cases before the formation of an abscess, is completely drained through the abscess, with permanent cure. In others the appendix is destroyed by the inflammation, and there is nothing left of it when the abscess is operated upon. To make an extensive search for the appendix is liable to break up adhesions, and then allow escape of septic fluid into the general cavity. Thus a very simple condition may be converted into one of the most serious that could happen in the peritoneal cavity. Dr. Davis believes that there cannot be much need of breaking up adhesions, for they give way in a short time after the abscess is relieved. In breaking up these adhesions, in addition to the danger mentioned, the surgeon prepares a favorable condition for fresh adhesions, with the possibility of the bowel being fastened in a position that will produce pain and often obstruction. After the abscess is thoroughly cleaned out, gauze packed into the abscess-cavity and between the abscess and abdominal wall will completely shut it off, and the chances for recovery will be good in such cases. Dr. Davis does not favor the breaking up of adhesions and searching for the appendix in cases of appendiceal abscess.

(To be continued.)

Prof. V. v. Hacker, of Vienna, has been called to the chair of Surgery in the University of Innsbruck.

NEWS ITEMS.

Methods of Medical Teaching is to be the subject of a day's session of the American Academy of Medicine at its next annual meeting, in Atlanta in May, 1896. Ten minutes each are to be allotted chosen speakers treating of the following subjects, and the whole question is then to be open to general discussion by members in five-minute speeches:

1. The Preparatory Mental Discipline of the Medical Student.
2. The Subjects to be Known Before Beginning the Study of Medicine.
3. The Lecture and its Uses.
4. Text-book Recitation and its Advantages.
5. Laboratory Methods.
6. Manual Training.
7. Clinical Instruction.
8. The Seminarian Method.
9. "Electives."
10. Quizzes, Reviews, etc.
11. Pass-examinations.
12. The Final Examination.
13. Students' Medical Societies.
14. State Examinations.
15. The Best Methods of Teaching Anatomy.
16. " " " Physiology.
17. " " " Inner Medicine.
18. " " " Surgery.
19. " " " Obstetrics.
20. " " " State Medicine.

The St. Louis Academy of Medical and Surgical Sciences was organized on November 6, 1895. The constitution of the society subscribes to the code of ethics of the American Medical Association. The membership is limited to fifty.

No one can become a member of the Academy unless he possesses a good literary and medical education. As evidence of his literary qualifications and ability as a scientific worker he must deposit with his application a thesis, a pathologic specimen with descriptive text, a drawing of a normal or abnormal specimen with text, or some other evidence of his worth. The evidence will be passed upon by the committee on credentials. If the evidence is accepted the ballot is taken. Two negative votes will defeat a candidate.

The following officers were elected for the ensuing year: *President*, George W. Cale, Jr., M.D., F.R.M.S., London; *Senior Vice-President*, James Moores Ball, M.D.; *Junior Vice-President*, Arthur E. Mink, M.D.; *Secretary*, Emory Lanphear, M.D., Ph.D.; *Treasurer*, Wellington Adams, A.M., M.D.; *Orator*, Thomas O. Summers, A.M., B.S., M.R.C.S. Eng., M.D.; *Curator*, George Howard Thompson, A.M., M.D.

The *Journal of Experimental Medicine* is the name of a new periodical to be published from January, 1896, and to be devoted to original investigations in physiology, pathology, bacteriology, pharmacology, physiologic chemistry, hygiene, and practical medicine. Dr. Wm. H. Welch, Professor of Pathology in the Johns Hopkins University, is to be the editor of the new journal, and with him will cooperate a board of twelve associate editors, as follows: For physiology: Drs. H.

P. Bowditch, R. H. Chittenden, W. H. Howell; for pathology: Drs. J. G. Adami, W. I. Councilman, I. M. Prudden; for pharmacy: Drs. J. J. Abel, A. R. Cushny, H. C. Wood; for medicine: Drs. R. H. Fitz, W. Osler, W. Pepper. In addition, a large number of the ablest of American investigators have consented to assist as collaborators. The new *Journal* will for the present appear quarterly, and the annual volume will contain from 600 to 700 pages. Messrs. D. Appleton & Co., of New York City, will be the publishers.

Dr. J. Edward Michael, a well-known surgeon and gynecologist, of Baltimore, Dean of the University of Maryland, and President of the Medical and Chirurgical Faculty of Maryland, died December 6, of nephritis, at the age of 47 years.

Prof. Löffler, the discover of the diphtheria-bacillus, has been decorated by the French Government with the Cross of the Legion of Honor.

Dr. Weller van Hook has been elected Professor of Surgery in the Polyclinic Medical School and Hospital of Chicago.

Dr. J. H. Wintrade, an esteemed physician of Marklesburg, Pa., died on November 17th at the age of 73 years.

BOOKS AND PAMPHLETS RECEIVED.

The Thermogenic Center in the Tuber Cinereum. By Isaac Ott, M.D. Reprint Med. Bulletin.

A Second Attack of Papillitis Occurring in a Case of Post-neuritic Atrophy of the Optic Nerves. By G. E. de Schweinitz, M.D., and A. G. Thomson, M.D. Reprint Archiv. Ophthalm., 1895.

Chronic Interstitial Ophthalmitis (Chronic Simple Glaucoma). By S. O. Richey, M.D. Reprint Annals Ophthalm. and Otol., 1895. The Treatment of Chronic Endometritis. By X. O. Werder, M.D. Reprint Pittsburg Med. Rev., 1895.

Abdominal Section in Ectopic Gestation where the Fetus is Living and Viable, with Report of a Successful Case. By X. O. Werder, M.D. Reprint Trans. Assoc. Obstet. and Gynecol., 1894.

A Case of Didelphic Uterus with Lateral Hematocolpos, Hematometra, and Hematosalpinx, with some Remarks on the Treatment of these Conditions. By X. O. Werder, M.D. Reprint Jour. Am. Med. Assoc., 1894.

The Medical Library for the Medical School or the Small Community. By Bayard Holmes, B.S., M.D. Reprint Bulletin Am. Acad. Med., 1895.

Trional: Its Range and Applicability. By Samuel Wolfe, A.M., M.D. Reprint Med. Bull.

The St. Louis Medical College. Fifty-fourth Annual Announcement, 1895-96, and Catalog for 1894-95. Nixon-Jones Printing Co.

Washington University, Dental Department. Thirtieth Annual Announcement and Catalog of the Missouri Dental College, St. Louis, Session of 1895-96. Nixon-Jones Printing Co.

Antiphthisin. Report on Professor Klebs' New Tuberculin-Derivatives, and some of the Cases Treated. By Charles Denison, A.M., M.D. Reprint Med. Rec., 1895.

Hematoblasts and Blood-platelets. By M. L. Holbrook, M.D. Reprint Proceedings Am. Microscop. Soc., 1894.

A Case of Otitic Abscess in a Diabetic, with a Fatal Result. By W. Cheatham, A.B., M.D. Reprint Cincinnati Lancet-clinic, 1895.

Favorable Results of Koch's Tuberculin Treatment in Tubercular Affections that are not Pulmonary. By Charles Denison, A.M., M.D. Reprint N. Y. Med. Jour., 1895.